

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2004

MONDAY, APRIL 7, 2003

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:40 p.m., in room SD-124, Dirksen Senate Office Building, Hon. Pete V. Domenici (chairman) presiding.

Present: Senators Domenici, Cochran, Craig, and Reid.

DEPARTMENT OF ENERGY

OFFICE OF ENVIRONMENTAL MANAGEMENT

STATEMENT OF JESSIE HILL ROBERSON, ASSISTANT SECRETARY

OPENING STATEMENT OF SENATOR PETE V. DOMENICI

Senator DOMENICI. Today the subcommittee is going to review the Department of Energy's fiscal year 2004 budget request for (1) the Office of Environmental Management and (2) the Office of Civilian Radioactive Waste Management.

In that regard, we will receive testimony from Ms. Jessie H. Roberson, Assistant Secretary for Environmental Management, and from Dr. Margaret S.Y. Chu, Director of the Office of Civilian Radioactive Waste Management. Both of today's witnesses have testified before this subcommittee before. We welcome you back and we look forward to your testimony today.

For the Office of Environmental Management the Department has requested \$7.2 billion, an increase of 4 percent from the current year of \$6.9 billion.

Secretary Roberson, since you took this job 2 years ago you have done many impressive things. You have led and completed a top-to-bottom review, you have revised the clean-up estimates to take 35 years and \$30 billion off the projected clean-up program, you have significantly narrowed the focus of the program, which was very much needed, you have shaken up the senior management of your office—I do not know that you want to say that. We will just say that for you—downsized the headquarters staff, and you have recompeted existing clean-up contracts, and perhaps most notably, secured increased budget requests from the Office of Management and Budget. That is truly borderline miraculous, considering that they always wanted us to do more with less.

You have successfully increased the amount of money that is going into this function, and now for fiscal year 2004 you are promising to get rid of the Idaho National Engineering and Environmental Laboratory by transferring it to the Office of Nuclear Energy and completely restructuring the budget to focus on your newly defined priority.

All of these we commend you for.

You have been nothing if not very busy during these first 2 years. You have proposed many changes in the programs. Many we have liked, some we are not so sure we like, but all have been vigorously pursued, and I believe your efforts will produce real successes in years to come.

Still you have many challenges ahead, and I am sure you will tell us about them today. You must continue to improve project management. The Department must ensure that the letters of intent and performance management plans produced over the last years are funded and—equally important—followed. The Department must convince the State regulators, jaded by years of broken promises, that the Department is a reliable partner in this clean-up, and the Department must learn to work more efficiently, even in an era of heightened safeguards and security concerns.

Your progress to date has been very good. I look forward to hearing about your plans for fiscal year 2004.

Now, regarding the budget request for the Office of Civilian Radioactive Waste Management, this year it is \$591 million, an increase of \$131 million, a 28 percent increase. After 20 years of scientific study, last year the President notified Congress that the Yucca Mountain site should begin the rigorous process of scientific and technical review leading to an NRC license for the facility. In July of last year, Congress accepted the President's recommendation, and the Yucca Mountain project now shifts its focus to licensing, building and operating the repository and related transportation infrastructure. This is a huge task, and no one knows that better than our Ranking Member, Senator Reid.

The country has decided to proceed with the construction of a nuclear waste repository, and it will cost close to \$10 billion in the next several years to complete it. We are all going to have to work together to ensure a strong future for nuclear power in our country and the world. Economics and environmental protection will demand a major role for nuclear power, and an acceptable spent fuel management policy, but even if we are successful in developing alternative methods of treating spent nuclear fuel, the country must still have a permanent geological repository.

Each of the program areas before us today will present unique challenges for this subcommittee. I will look forward to engaging each of our witnesses today and working with all the members of this subcommittee to put together the best possible appropriations bill.

I will now yield to my Ranking Member, Senator Reid. Thank you, Senator Reid.

STATEMENT OF SENATOR HARRY REID

Senator REID. Thank you very much, Mr. Chairman.

Our subcommittee has spent a lot of time working with you, Secretary Roberson, and your staff on the administration's clean-up initiative last year. Obviously, I am happy to see that your budget request fully supports the accelerated clean-up program that has resulted from your efforts last year, but the hard part now begins. We need to turn to the higher dollar totals you are getting now and for the next few years into verifiable progress in getting clean-ups done more quickly and at lower cost.

There are members of this subcommittee and certainly the full committee from States that have much bigger clean-up programs than does Nevada, for sure, and if they have more questions, they will pursue those, the details of that, but your request this year includes a plea for some additional flexibility on the treatment of construction projects, and this is something I am confident Senator Domenici and I can consider.

Let me now talk to you, Dr. Chu. As I understand it, and I am almost certain I am right, this is your first opportunity to testify before this subcommittee. I am most interested in several statements that you made about the Department of Energy's plans for submitting a license application in December of 2004.

One of the most important conclusions of a report issued by the GAO a few years ago was that DOE never rebaselined the Yucca Mountain project. Your written testimony suggests the only thing standing between you and a license application in the fourth quarter of fiscal year 2004 is getting the full fiscal year 2004 budget request. This strikes me as somewhat unlikely, and I suspect it would strike the GAO as absurd, given the technical and financial difficulties that your office has faced for years, not you personally, but your office.

Even if you do file an application on time next year, your supporters are probably going to want to know how it is that you were able to get everything you needed to be done so correctly and promptly when Congress has not given you anything close to your budget request for more than a decade. All of us will want to know what you have done poorly or not at all in a rush to meet these milestones.

As you know, one of the biggest concerns about this project is this issue of transporting waste across the country. Last year the Secretary of Energy seemed to say that there is plenty of time to resolve transportation issues. This is exactly what he said. Because the site has not yet been designated, the Department is just beginning to formulate its preliminary thoughts about the transportation plan. There is an 8-year period before any transportation to Yucca Mountain might occur. This will afford ample time to implement a program that builds upon a record of safe and orderly transportation of nuclear materials and makes improvements to it where appropriate, end of quote.

Your testimony, though, paints a different picture, contrary to what the Secretary said. You indicate in your testimony you have been underfunded and as a result you have deferred critical work on transportation. I am more inclined to believe your testimony than that of the Secretary's. They are not compatible. One has to be more accurate than the other.

The transportation of nuclear waste has tremendous implication for the health and safety of all Americans. It is not an issue that should be used as an example for political purposes. The fact remains, you have not studied transportation and have no assurance that you can do this. I do not understand how you can consider beginning a licensing process for the repository when you do not know how you would transport this waste.

While we are on the issue of trust, I want to make this point about what I feel is the unfair treatment of Nevada. The issue has only been worse, and I am not talking about you personally, because you are new on the job and we have great expectations for you and, as you know, I released a hold that I had on you indicating that I thought you had good credentials and would try to be fair, and you indicated that you would be, and I have nothing to indicate that is not the case.

However, we have \$600,000 in oversight funds for the State of Nevada from fiscal year 2002 that have not been released to the State, yet you are also holding half of the funding for the State's affected counties despite the fact that your own internal audits have revealed problems in only two of the counties, that is Nye and Lincoln Counties.

If the audits are revealing disallowed costs in one or two counties, I would prefer that you divert the funding to the other units of affected government rather than sitting on it all. I am not going to defend any counties that are spending Federal dollars inappropriately if that, in fact, is the case, but it is really unacceptable for you to hold all the monies because two counties are doing something allegedly wrong.

And to make matters worse, the DOE has failed to provide oversight funding for the States and counties in the fiscal year 2004 budget. We put some money in, but we should not have to do that. That should be part of the responsibility of you, because there is lofty rhetoric coming out of the Department all the time concerning partnering with our State and its counties, but cutting off all funds does not seem to fill me with any hope that you really care about what is taking place in Nevada.

PREPARED STATEMENT

You have explained to my staff that you called for a pause—that is your word, not mine—on funding, but I do not find any of that compelling and plan to reinsert funding in the fiscal year 2004 bill. I think that would be the right thing to do.

Chairman Domenici has never tolerated the Department treating his State or any other State or any locality shabbily, and I am going to continue the example set by Senator Domenici on how New Mexico has been treated with all the many things the DOE has there, with what I feel should be the treatment of the people of Nevada.

Thank you very much, Mr. Chairman.
[The statement follows:]

PREPARED STATEMENT OF SENATOR HARRY REID

Mr. Chairman, I appreciate you holding this hearing today to discuss the budget for the Environmental Management program and the Yucca Mountain program.

Like you, I am pleased to welcome Ms. Jessie Roberson, the Assistant Secretary for the Office of Environmental Management, and Dr. Margaret Chu, the Director of the Office of Civilian Radioactive Nuclear Waste.

Secretary Roberson, I am pleased you are here today. As the steward of the largest program office within the Department of Energy, you have a huge responsibility.

Our Subcommittee spent a lot of time working with you and your staff on the Administration's Clean-up Reform Initiative last year. Obviously, I am very happy to see that your budget request fully supports the accelerated clean-up program that has resulted from your efforts last year.

The hard part begins now. We need to turn the higher dollar totals you are getting now and for the next few years into verifiable progress on getting the clean-ups done more quickly and at lower cost.

There are several Members here from states that have much bigger clean-up programs than does Nevada, so I will allow them to pursue you on those details.

I see that your request this year includes a plea for some additional flexibility on the treatment of construction projects. This strikes me as something that Chairman Domenici and I can at least consider.

However, let me now turn my attention to today's other witness, Dr. Chu.

Dr. Chu, you have been on the job for just a little over a year now. For whatever reason, the Administration was not able to find a Bible and get you sworn in before last year's hearing despite your confirmation by the Senate, so I am glad you are finally getting your first opportunity to testify before this Subcommittee.

I want to talk for a few minutes about several components of your testimony.

I am most interested in several statements you make about the Department of Energy's plans for submitting a license application in December 2004.

One of the most important conclusions of a report issued by the General Accounting Office a few years ago was that the DOE never re-baselined the Yucca Mountain project.

Your written testimony suggests that the only thing standing between you and a license application in the fourth quarter of calendar year 2004 is getting the full fiscal year 2004 budget request.

This strikes me as unlikely, and I suspect it would strike the GAO as absurd, given the technical and financial difficulties you have faced for years.

I completely understand why you would be reluctant to take advice from me on a Yucca Mountain-related matter, but I am going to offer you some anyway: if you are not going to make the deadline, you should probably start laying that groundwork now. If you wait until next year, the folks you are going to anger are going to be the Members whose support you need most.

Additionally, even if you do file an application on-time next year, your supporters are probably going to want to know how it is that you were able to get everything you needed to do done correctly and properly when Congress has not given you anything close to your budget requests for the better part of a decade. All of us will want to know what you have done poorly or not at all in a rush to meet this milestone.

As you know, one of my biggest concerns about this project is this issue of transporting waste across the country. Last year, the Secretary seemed to say that there is plenty of time to resolve transportation issues.

Here is what he said:

"Because the site has not yet been designated, the Department is just beginning to formulate its preliminary thoughts about a transportation plan. There is an eight-year period before any transportation to Yucca Mountain might occur. This will afford ample time to implement a program that builds upon our record of safe and orderly transportation of nuclear materials and makes improvements to it where appropriate."

However, your testimony paints a very different picture. You indicate in your testimony that you have been underfunded and as a result you have "deferred critical work on transportation."

The transportation of nuclear waste has tremendous implications for the health and safety of all Americans.

It is not an issue that should be used as an example to make a political point.

How are we supposed to trust you to secure the health and safety of Nevadans, when we can't even trust you to tell the truth about what you are doing with your budget.

The fact remains you haven't studied transportation and have no assurances that you can do this safely.

I do not understand how you can consider beginning a licensing process for the repository when you don't even know how you would transport all this waste or if you can even do this safely.

While we are on this issue of trust, I would like to make one final point about your program's treatment of the people of the Nevada.

In my view, the Department of Energy has shown little regard for the people of Nevada.

This issue has only become worse in the last few years. In fact, nearly \$600,000 in oversight funds for the state of Nevada from fiscal year 2002 have not yet been released to the state. You are also holding on to half of the funding for all of Nevada's affected counties despite the fact that your internal audits have revealed problems in only two of them (Nye and Lincoln).

If the audits are revealing disallowed costs in one or two counties I would much prefer that you divert the funding to the other units of affected government rather than sitting on it. I will not defend any counties that are spending Federal dollars inappropriately, if that is in fact the case, but it is unacceptable for you to be withholding those funds.

To make matters worse, the Department of Energy has failed to provide oversight funding for the state and the counties in the state of Nevada in the 2004 fiscal year budget. For all of the lofty rhetoric coming out of the Department concerning partnering with our state and its counties, cutting off all funding does not fill me with hope that you really care about Nevadans at all.

I understand you have explained to my staff why it is that you have called for a "pause"—your word, not mine—in funding. However, I don't find any of that compelling and plan to re-insert funding into the fiscal year 2004 bill.

Chairman Domenici has never tolerated the Department treating his state or his localities shabbily and neither will I.

Senator DOMENICI. Senator Cochran.

STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. Mr. Chairman, I would like to just make an opening statement and submit some questions for the record.

Mr. Chairman, I am pleased to be here today to hear the testimony of Secretary Roberson. She oversees a very important program within the Department of Energy, the Environmental Management program. That program is currently conducting testing on a type of technology which has the potential to expedite the clean up of nuclear sites. This process is called the "advanced vitrification system" and the research on it is conducted at Mississippi State University's Diagnostic Instrumentation and Analysis Laboratory (DIAL).

Following last year's hearing on this program, I was pleased to learn the Department had invested in the preparation of a work plan that would perform the engineering and design to bring the advanced vitrification system to a pilot plant for further testing. The advanced vitrification system technology has been tested and evaluated for the Department for several years at DIAL.

I commend the Administration for its efforts to reform the waste program and I am pleased that our subcommittee provided funds to demonstrate higher risk, high-payoff technologies, including the advanced vitrification system technology. This Committee has also continued to express its support for these systems, most recently in the fiscal year 2003 Omnibus Appropriations Conference Report. In that the Congress urged "the Department to consider continued evaluation, development and demonstration of the Advanced Vitrification System" and directed the Department to "develop the vitrification-in-the-final-disposal-container AVS system in accordance with the work plan."

Mr. Chairman, the government should continue to invest in advanced backup technologies that serve as an insurance policy and may be essential to the national defense. I look forward to hearing from Secretary Roberson on the progress she and Secretary Abraham are making to reform the Environmental Management program and achieve schedule and cost savings in the waste program. I am also interested in the status of the Department's evaluation of alternative technologies and I will have some questions regarding that effort and her intentions for implementing the Department's work plan for the advanced vitrification system technology.

Madam Secretary, I am here to ask a question really, but I will submit the questions I have for the record and ask you to submit your answers for the record so we will not unnecessarily delay the hearing, but at last year's hearing you may remember that I raised a question about some competing technologies that might be available in our clean-up efforts, and I was very pleased to learn at that hearing that you had directed the preparation of a work plan that could lead to the establishment of a pilot plant for competitive testing against other technologies.

This approach that is being tested now at Mississippi State University has the potential to provide reduced costs and competition that is needed in my opinion in this program. We put in the committee report last year a suggestion that this was an appropriate direction for the Department to move.

ADVANCED VITRIFICATION SYSTEM (AVS) AND RADIOACTIVE ISOLATION CONSORTIUM (RIC)

Much of the funding has shown that the potential of the advanced vitrification system at the Diagnostic and Instrumentation Laboratory at Mississippi State University is expected to provide analytical analysis that will answer questions and provide a testing history that could be used to compare with competing systems. I am hoping that you can give us an updated report on the status of this initiative and what your plans are for developing alternative technologies that offer a cost and schedule savings in this program. That is my purpose for being here.

Ms. ROBERSON. We will be glad to do that for you, Senator.
[The information follows:]

As you may be aware, the DOE Office of Inspector General issued a report on the Advanced Vitrification System (AVS) in August 2002, providing the following recommendations:

- Delay funding decisions on AVS until major uncertainties have been addressed;
- Develop specific, focused performance measures to more fully gauge progress in the evaluation and selection of an alternative or advanced vitrification technology; and
- Address all technical, programmatic, and financial challenges and uncertainties identified in previous studies during the upcoming business plan evaluation.

I have agreed with these recommendations and developed an Action Plan, which describes an approach to evaluate and develop immobilization alternatives for treating high-level waste (HLW) at Hanford. We have evaluated the technical and financial merits of AVS and other alternatives recommended by a technical panel. Those alternatives include an advanced Cold Crucible Melter and an Advanced Joule Heated melter. As part of the evaluation, questions regarding technical details of the AVS were provided to the Radioactive Isolation Consortium (RIC). Representatives from the RIC provided the Department with responses to the questions and participated in a review which was held on February 24–28, 2003, in Richland, Wash-

ington. The two review teams (technical and financial) are currently drafting their reports and will submit them to a DOE technical working group (TWG).

The TWG has the responsibility of reviewing the reports and making a recommendation to me for future research and development of immobilization alternatives to treat HLW. A decision is currently planned for June 2003. The Department has extended the period of performance and associated funding to the Radioactive Isolation Consortium (RIC) through the end of June 2003 to support this schedule.

Senator COCHRAN. I appreciate it. Thank you very much.

Senator DOMENICI. Thank you, Senator.

Secretary Roberson, will you proceed? Your testimony will be made a part of the record as if read. If you would abbreviate it, we would be pleased.

Senator REID. If I could just say this, I want to tell you how much I appreciate you holding a meeting on Monday. We should do more of these Mondays and Fridays when we do not have the Senate in session. We can do this uninterrupted. We are not running in and out of here. It is just such a better system, and I appreciate you doing this.

Senator DOMENICI. Thank you. The only problem is, you are among the few that appreciate it.

The other ones would rather not be at work on Monday, but I think it is a very good day, I agree with you.

Please proceed.

STATEMENT OF JESSIE HILL ROBERSON

Ms. ROBERSON. Thank you. Good afternoon, Chairman Domenici, members of the subcommittee, Senator Cochran, Senator Reid. I am pleased to be here today to discuss the President's fiscal year 2004 budget request for the Department of Energy's Environmental Management program.

Eighteen months ago, Secretary Abraham directed me to review from top-to-bottom the EM program and uncover those obstacles hindering efficient and effective clean-up of our sites. As you may be aware, the top-to-bottom review, which was published last February, concluded that EM had lost the focus of its core mission to remedy the legacy of the Cold War's impact on the environment. We had to take immediate action.

With the top-to-bottom review as the blueprint for the program, we have aligned EM's focus from risk management to risk reduction and accelerated clean-up and closure, the intended mission of the Environmental Management program from the start. We have made remarkable progress this year towards our goal of saving at least \$50 billion over the life of the program and completing the program at least 35 years earlier, but we must not succumb to the idea that all problems are solved.

The momentum we have gained must not be compromised or allowed to weaken. We must stay the course. The actions and strategies we have implemented, while producing key results, must be given the chance to further evolve, bringing even greater gains in risk reduction and clean-up sooner.

Underpinning these strategies are several groundbreaking reforms that will propel us forward in our thinking and our actions. We are implementing a new acquisition strategy. We are aggressively using and managing the acquisition process as a key tool to

drive contract performance and risk reduction results. We have established 10 special project teams to carve new innovative paths for accelerated clean-up. Each team is formulating corporate-level initiatives and activity-specific actions to accelerate risk reduction further and in a much more improved manner.

We have implemented a strict configuration control management system that baselines a number of key critical program elements. Robust change control and monitoring of those key elements will facilitate a high confidence level that the direction of the program is on course and that our objectives are being accomplished.

The budget request before you is one of our most crucial reforms. This request, a cornerstone of our transformation, is a major step toward aligning performance with the resources needed to expedite risk reduction and clean-up. This budget request sets the foundation for budget planning and execution of the accelerated risk reduction and closure initiatives.

Today, the EM program is still very much a defense environmental liability, responsible for the disposition of many tons of special nuclear material, 88 million gallons of radioactive liquid waste, 2,500 metric tons of spent nuclear fuel, 135,000 cubic meters of transuranic waste, and well over 1 million cubic meters of low-level waste. I ask the committee to stay with us as we continue our quest to eliminate risks posed by these materials at a pace few of us could have imagined 2 years ago.

For example, just within the last week at Savannah River, the Defense waste processing facility was restarted on March 29, and completed its first canister pour with waste and a new glass FRIT. At Savannah River on April 1, the first 3013 cans for safe long-term storage of plutonium materials was produced in the FP line packaging and stabilization system 60 days ahead of schedule.

At Rocky Flats, the Plutonium Stabilization and Packaging System has produced 425 containers in the first 3 months of this year and is producing at a rate of 140 3013's per month, well ahead of the schedule for that campaign.

At Hanford, as of April 4, we are 97 percent complete in stabilizing plutonium residues and are expecting to finish that commitment 10 months ahead of schedule. We are also removing and stabilizing spent fuel from K basins at a rate more than five times greater than when we began operations and are about 54 percent complete.

At the Office of River Protection, waste retrieval from Tank C-106 commenced on March 31. At Fernald, contract modification was completed on March 28, making closure in 2006 an actual contract requirement and reducing the target cost by \$400 million. Contract transition at Mound has been successfully completed and is focused on completing no later than March 2006. At Oak Ridge, equipment removal operations commenced in Building K-29 and ETTP, and at Idaho, the Advanced Mixed Waste Treatment project sent its first TRUPACT-II to WIPP on March 31.

None of these were viewed as realistic goals 2 years ago by our skeptics and critics. We view our job as not to let skeptics convince us of what we cannot do, but to demonstrate by our actions what we can do. New ideas and breakthroughs have grown from looking beyond the paradigm of risk management to the new focus of accel-

erated risk reduction. We are experiencing the realization that for the first time the goal of completing the current clean-up is within our grasp.

PREPARED STATEMENT

We are at a turning point in this program in spite of the challenges ahead, and there are challenges, challenges that have existed from the beginning of this program. We did not create them in accelerated clean-up. They have simply been lying in wait. We are taking these challenges on. Our momentum is building. I ask for your support of our fiscal year 2004 budget request of \$7.24 billion to ensure our impetus does not diminish.

Thank you, sir.

[The statement follows:]

PREPARED STATEMENT OF JESSIE HILL ROBERSON

Mr. Chairman and Members of the Subcommittee, I am pleased to be here today to discuss the reform of the Department of Energy's Environmental Management (EM) program, our progress in implementing cleanup reform, and the importance of sustaining the momentum for the benefit of the many generations to come. I appreciate the opportunity to sit before you and share our actions of this past year and the opportunities that lie before us.

In 1996, Congress took a bold step that fundamentally altered the course of the cleanup program in the Department of Energy when it supported the accelerated closure of Rocky Flats. This was at a time when there was little reason and no demonstrated track record to believe that the Department could deliver on a challenge of this magnitude. Congress took further steps in 1999 when it created the Defense Facilities Closure Projects account and challenged the Department of Energy to close three of its nuclear sites by 2006. While it has taken significant effort and dedication, today all three of those sites, Rocky Flats, Mound, and Fernald, will close on or ahead of schedule. The vision and support that Congress provided planted the seeds of success in the cleanup program and we have already begun harvesting those fruits.

Nonetheless, success at other sites in the EM program remained elusive. Year after year, it continued to take longer and cost more to complete the cleanup and we slowly devolved into a program that promised little and delivered even less. By the end of fiscal year 2001, the environmental cleanup program stood as one of the largest liabilities of the Federal government.

Last year, as ordered by Secretary Abraham, the Department completed a Top-to-Bottom Review of its cleanup program and concluded that significant change was required in how the Department attacked risk reduction and cleanup for the rest of its sites. Two years ago, as costs continued to increase, we estimated that it could take over \$300 billion and nearly 70 more years to complete cleanup—20 years longer than the actual operations of our oldest facilities and 25 times longer than the actual construction of our most complex facilities. We concluded that a fundamental change to how we approached, managed, and performed the entire cleanup program was required. Last year I started the effort to reform this massive program, and while our most daunting challenges still lie in front of us, we are now focused, moving in the right direction. The accelerated cleanup program has started to build momentum.

Today the EM program is still very much a defense liability, responsible for many tons of special nuclear material in the form of plutonium and enriched uranium, which would make it one of the world's largest nuclear super-powers. In addition, the EM program is responsible for safely disposing of 88 million gallons of radioactive liquid waste, 2,500 metric tons of spent nuclear fuel, 135,000 cubic meters of transuranic waste, and well over 1 million cubic meters of low level waste. I ask the Committee to stay with us as we continue our quest to eliminate risks posed by these materials at a pace few of us could have ever imagined.

Since the completion of Secretary Abraham's Review, the estimated cost to complete the cleanup program has decreased by over \$30 billion and the time to complete will be shortened by 35 years. This means that the risks to our workers, our communities, and the environment will be eliminated a generation earlier than the previous plan. But I am not satisfied and neither should you. My goal is to accel-

erate risk reduction and cleanup and shorten this program even further while decreasing costs by more than \$50 billion.

In fiscal year 2004, President Bush is requesting a record \$7.24 billion for the accelerated cleanup program. The Administration's funding request continues the great progress we made last year with our regulators and communities. The Administration believes that this investment, which we expect to peak in fiscal year 2005, is crucial to the success of accelerated risk reduction and cleanup completion. We anticipate funding will then decline significantly to about \$5 billion in 2008.

The EM portion of the fiscal year 2004 Congressional budget contains some creative and innovative changes that are greatly needed to support our accelerated risk reduction and closure initiative. The first of these is a new budget and project baseline summary structure that focuses on completion, accountability, and visibility; institutionalizes our values; and integrates performance and budget. Requested funding can clearly be associated with direct cleanup activities versus other indirect EM activities. Second, where appropriate, we have limited the inclusion of line-item construction projects as activities for separate authorization and funding controls to facilitate timely and sensible tradeoff decisions that otherwise may not be possible. We solicit your support for this flexibility as we implement our accelerated cleanup strategies, with the understanding that improving project management remains a significant challenge for the Department. Third, this budget reflects the transfer of multiple activities that are not core to the accelerated cleanup mission to other Department elements. They include the transfer of INEEL landlord responsibilities to the Office of Nuclear Energy, Science and Technology, transfer of the long-term stewardship program to the new Office of Legacy Management, and several others.

The Administration considers this program vitally important. We stand at an important crossroads in the cleanup program today—success is clearly within our reach, but so is failure. I believe the cleanup of the former nuclear weapons complex is far too important a matter to be left to chance. With your past assistance, we laid a solid foundation that is already showing signs of early success. Moving forward, we need your continued support to achieve success.

A YEAR OF TRANSFORMATION

Last year at this time, the Top-to-Bottom Review had been recently released, citing recommendations to quickly improve performance. I wish to take a moment to recap the recommendations and update you on our progress in remedying these weaknesses.

Improve DOE's Acquisition Strategy and Contract Management.—A key conclusion of the Top-to-Bottom Review was EM's contracting approach was not focused on accelerating risk reduction and applying innovative cleanup approaches. Processes for contract acquisition, establishment of performance goals, funding allocation, and government oversight were managed as separate, informally related activities rather than as an integrated corporate business process. Contracting strategies and practices made poor use of performance-based contracts to carry out EM's cleanup mission. The Top-to-Bottom Review Team recommended that all current performance-based contracting activities be reviewed and, where necessary, restructured to provide for focused, streamlined, and unambiguous pursuit of risk reduction.

Move EM to an Accelerated, Risk-Based Cleanup Strategy.—EM's cleanup strategy was not based on comprehensive, coherent, technically supported risk prioritization—another important observation cited by the Review team. The program was implementing waste management practices and disposition strategies costing millions without providing a proportional reduction in risk to human health and the environment. Cleanup work was not prioritized to achieve the greatest risk reduction at an accelerated rate. Interpretation of DOE Orders and requirements, environmental laws, regulations, and agreements had created obstacles to achieving real cleanup benefiting neither human health nor the environment. Resources were diverted to lower-risk activities. Process, not risk reduction, had become the driving force. The Review recommended that DOE initiate an effort to review DOE Orders and requirements as well as regulatory agreements, and commence discussions with states and other regulators with the goal of accelerating risk reduction.

Align DOE's Internal Processes to Support an Accelerated, Risk-Based Cleanup Approach.—The Review found DOE's own internal processes inconsistent with a risk-based cleanup approach. The hazards at the DOE sites and the liability associated with them did not appear to dictate the need for urgency in the cleanup decisions. The Review team emphasized that the EM mission cannot be accomplished by continuing business as usual. Immediate actions in all elements of the EM program would need to be taken to transform DOE's processes and operations to reflect the new accelerated risk-based cleanup paradigm.

Realign the EM program so its scope is consistent with an accelerated, risk-based cleanup and closure mission.—The Review team underscored the necessity that EM should redirect, streamline, or cease activities not appropriate for accelerated cleanup and closure. A laser-like focus on the core mission was needed to realize the cleanup of the Cold War legacy in our lifetime. Though many of these non-core activities may be worthy of DOE or federal government support, a reassessment of the relevance of non-related or supporting missions was warranted to focus the EM program. The financial and administrative resources required for EM implementation and oversight of these activities represent a major commitment for EM.

In response to the Review's recommendations we have:

Developed and are implementing a new acquisition strategy.—In the area of acquisition strategy and contract management, we have not been idle. We are aggressively using and managing the acquisition process as one tool to drive contract performance. We are evaluating both the performance and design of every contract in this program and as opportunities become clear we are making corrective action. One example of our progress is the December 2002 award of a new contract for the cleanup and closure of the Mound site. The whole process, which required changes in DOE's internal business practices, was accomplished in just 6 months from time of the issuance of the Request for Proposals (RFP) to the awarding of the contract. Another example is at Oak Ridge, where we are transforming the cleanup contract into a closure contract with a one-year demonstration period to further our overall cleanup goals. Changing this contract arrangement will accelerate cleanup work by 5 years and save \$1 billion over the life of the program at the site.

But that is just the tip of the iceberg. I envision a broader overhaul of EM's entire acquisition process, including our methodology for formulating acquisition strategy, developing RFPs, identifying performance-based incentives, and providing oversight of contractor performance. We are pursuing a path to both increase competition by enlarging the pool of potential contractors competing for our work and increase the accountability of our contractors to deliver real, meaningful cleanup. Our acquisition strategy focuses on five areas. First, we are "unbundling" work into smaller packages where it makes sense. Second, we are driving innovation and improved cost performance through the use of small and smaller businesses, complementing the unbundling strategy. Third, we are actively promoting innovation in our cleanup work through the competitive process where improved performance is required. Fourth, we are extending or modifying contracts where excellent performance has been clearly demonstrated. Fifth, we are modifying and changing our acquisition processes to support these strategies in order to allow them to be successfully implemented.

To complement these steps, we have launched a Contract Management Review Board to review our contracts from a more corporate perspective. Our goal is to ensure that the lessons learned, both good and bad, from all our endeavors are institutionalized into our contracts and business practices and that we suspend those contract philosophies that do not support accelerated risk reduction and cleanup of our sites.

Established 10 special project teams to carve new innovative paths for accelerated cleanup and risk reduction.—The Top-to-Bottom Review identified unfocused and inconsistent work planning processes as the principal contributors to EM's uncontrolled cost and schedule growth. To address this failing, I formed ten special corporate projects, each assigned a specific strategic objective. Each team is formulating corporate level initiatives to accelerate risk reduction in a much improved, more cost-effective manner. Objectives include contracting, high-level waste, and consolidation of Special Nuclear Material. Each of the special projects has a dedicated project manager, supported by an integrated project team, to identify, plan, and execute needed changes in the EM program. These project teams, using project management principles, are key to correcting our work planning processes and instilling rigor into our internal management decisions.

Meaningful, lasting reform must be the result of leadership and commitment but it must find its way into the very core of the organization to be sustained. Building a high-performing culture requires attracting and retaining talented people who deliver excellence in performance. Improving management efficiencies requires that organizations challenge, hold accountable, and reward top-performing employees. This corporate initiative does just that. These ten teams will herald a new standard of performance, innovation, and greater results for the EM program. Our goal is not just to establish performance-based contracts but to solidify a performance-based program for all who choose to have a role.

Implemented a strict configuration management system.—Another reform we have implemented is a strict configuration management system that baselines a number of key, critical program elements. Examples of some of the key elements include the

Performance Management Plans, EM corporate performance metrics, contract performance measures/incentives, and life-cycle costs. Strict change control and monitoring of these key elements will facilitate a high confidence level that the goals and direction of the accelerated cleanup initiative are being met.

In October 2002, EM established several new corporate performance measures for the program. EM will continue to track corporate measures such as the number of geographic sites completed, the amount of transuranic waste disposed, and the number of plutonium metal/oxides packaged. However, new corporate measures such as the volume of liquid waste in inventory eliminated, number of liquid waste tanks closed, number of enriched uranium containers packaged, and amount of depleted and other uranium packaged are a key part to the successful execution of EM's accelerated cleanup strategies. In addition, EM is establishing site resource-loaded baselines that will enable the program to comprehensively track progress against its accelerated risk reduction, cost, and schedule objectives. The establishment of these new performance measures and a rigorous configuration management system are resulting in clear lines of accountability for what is expected. With this critical tool, EM is now able to make crucial corporate decisions that will keep the program on track, control cost increases, and minimize schedule growth.

Identified work activities that directly support accelerated cleanup from those that do not.—A key finding of the Top to Bottom Review was that EM was supporting and managing several types of activities that may not be appropriate for an accelerated risk-reduction and cleanup program. In that light, I took a hard look at those activities and, while they may be of importance to the Department and the Federal government, they may not be best aligned in the EM program. Based on that assessment, for fiscal year 2004, the following identified program elements were not included in the EM budget but, because of their importance to the Department, have been transferred to other DOE organizations with which they are more appropriately aligned. They represent activities that are not part of the core accelerated risk reduction and closure mission.

- Environmental Management staff at the National Energy Technology Laboratory transferred to the new Office of Legacy Management.
- The Analytical Services Program transferred to the Office of Environment, Safety and Health.
- The Radiological and Environmental Sciences Laboratory transferred to the Office of Environment, Safety and Health.
- Pre-existing liabilities and long-term contractor liabilities transferred to the Office of Legacy Management.
- The Long-term Stewardship Program transferred to the Office of Legacy Management.

In addition, landlord responsibilities for the Idaho National Engineering and Environmental Laboratory were transferred to the Office of Nuclear Energy, Science and Technology to reflect the site's major mission realignment.

Revitalized our human capital strategy.—Another key management reform is the human capital revitalization that strongly supports the President's Management Agenda. This reform focuses on building a high-performing culture that attracts and retains talented managers and staff to deliver sustained performance excellence. We have built a more robust performance accountability system that holds each manager and employee accountable for actions and results and rewards them accordingly. Individual performance management is being fully integrated into EM organizational goals; executives are being held accountable for achieving strategic program objectives, fostering innovation, and supporting continuous improvement.

We are implementing an executive mentoring program with our senior executives with the objective of having a cadre of executives who are well-rounded and are prepared to effectively lead irrespective of the position to which they might accrue. We are becoming a flatter and more effective organization with a goal to have an organizational structure that is clearly aligned to deliver on our accelerated risk reduction and closure initiative.

Aligned tangible, consequential results to resources with this budget request structure.—Given all these changes and advances, the budget request before you is one of the most crucial. This budget request structure is the foundation for budget planning and execution of the accelerated risk reduction and closure initiative. This new structure clearly identifies scope and resources that directly support the core accelerated cleanup and risk reduction mission from those that do not. The new structure consolidates risk reduction and completion activities into only two appropriations (defense and non-defense) in addition to the existing Uranium Enrichment Decontamination and Decommissioning Fund. This structure removes barriers to facilitate better resource utilization and segments accelerated completion into three distinct accounts to highlight accountability.

In addition, implementation of this new structure will complement other management reform initiatives by focusing on completion or endpoint, clearly delineating how resources will be utilized (i.e., for direct cleanup activities or for other activities in the program that only indirectly relate to on-the-ground cleanup activities), and communicating the goals and objectives that we value. Last, but not any less important, this new structure will support integration of performance and budget for the EM program.

THE FISCAL YEAR 2004 BUDGET REQUEST

The fiscal year 2003 budget was a transitional budget in which management reforms were developed and significant efforts were put forth to improve performance, accelerate cleanup, and reduce risk. The strategic groundwork has been laid, and the EM program is moving forward with its risk reduction and cleanup strategies. The investment we have requested in our fiscal year 2004 budget will keep EM's new accelerated risk reduction and cleanup strategies on track.

The EM fiscal year 2004 budget request has been tailored to meeting our mission of accelerated risk reduction and completion. This budget fully reflects each site's new accelerated risk reduction and cleanup strategies. The fiscal year 2004 budget request is a major step toward aligning performance with the resources needed to expedite risk reduction and cleanup.

The 2004 budget request for EM activities totals \$7.24 billion to accelerate risk reduction and closure. The request includes five appropriations, three of which fund on-the-ground, core mission work, and two of which serve as support. The five appropriations and associated requested funding are:

- Defense Site Acceleration Completion (\$5.8 billion)
- Defense Environmental Services (\$995 million)
- Non-Defense Site Acceleration (\$171 million)
- Non-Defense Environmental Services (\$292 million)
- Uranium Enrichment Decontamination and Decommissioning Fund (\$418 million)

Through the implementation of accelerated cleanup strategies, the EM program anticipates that cleanup will be completed by 2035, at least 35 years earlier than originally anticipated, with the potential of life-cycle savings of greater than \$50 billion.

In building the request, the Department applied the following principles and priorities:

Protect workers, public, and the environment.—The budget request continues to place the highest priority on protecting workers, the public, and the environment. The implementation of new cleanup strategies will allow for an overall improvement in safety and reduction in risk because cleanup will be completed sooner, reducing the extent to which workers, the public, and the environment have the potential to be exposed.

Ensure the appropriate levels of safeguards and security.—Due to heightened security levels throughout the nation, it is crucial that we maintain vigilance in our domestic security to protect our citizens. The EM program is responsible for many tons of surplus nuclear material. This budget request reflects our increased safeguards and security needs. In particular, the sites with the largest funding needs are Savannah River and Hanford. Savannah River's increase in funding supports protective force staffing for the HB Line Category 1 Process and plutonium stabilization activities, perimeter improvements, maintenance on security systems, vulnerability assessments, and Capital and General Plant Project upgrades. Hanford's increase in funding supports updates to the Critical Facility Vulnerability Assessment, additional security employees for Waste Treatment and Immobilization Plant construction, security clearance processing, drug testing, and accelerated movement of special nuclear material to Savannah River and/or the Grout Facility.

Reduce risk methodically.—Accelerated risk reduction requires a pragmatic approach to cleanup based on real risk reduction. Risk reduction occurs in various stages, which involve the elimination, prevention, or mitigation of risk. Because safe disposal of many materials will take a number of years to complete, our major focus of risk reduction is stabilization of high-risk materials.

The following categories of materials are considered to pose the highest risk:

- High-curie, long-lived isotope liquid waste
- Special nuclear materials
- Liquid transuranic (TRU) waste in tanks
- Sodium bearing liquid waste in high-level waste tanks
- Defective spent nuclear fuel in water basins
- Spent nuclear fuel in leaky or poor water chemistry basins

- High TRU waste content (greater than 100 nanocuries/gram)
- TRU waste stored on the surface
- Remote-handled (RH) TRU waste
- Decontamination & Decommissioning of highly contaminated facilities

Although all of these items are to be considered when setting priorities, their relative ranking may vary from site to site. For example, the following sites have planned activities/milestones for fiscal year 2004 that correspond to their site-specific risk categories.

Hanford

- Close 6 single-shell tanks; the first tanks closed at the site.
- Complete interim stabilization of Hanford single-shell tanks, which completes removing all pumpable liquids from single-shell tanks.
- Complete 30 percent of the Hanford Waste Treatment and Immobilization Plant.
- Complete stabilization of plutonium metals, oxides, and residues.
- Complete removal of all spent fuel from the K Basins and place in dry storage in the Canister Storage Building.

Idaho

- Complete the transfer of spent nuclear fuel in the Power Burst Facility canal from wet storage to dry storage at the Idaho Nuclear Technology and Engineering Center.
- Ship off-site a total of 1,819 kg total uranium (leaving a remainder of 825 kg).
- Begin the transfer of EBR-II spent nuclear fuel from the Chemical Processing Plant to the Argonne National Laboratory—West for treatment and disposition as an interim step to removing all EM spent nuclear fuel from wet storage.
- Support treatment of sodium-bearing waste: complete conceptual design activities for the sodium bearing waste treatment project, initiate preliminary design on primary technology, and complete Sodium Bearing Waste Treatment Facility Critical Decision 1 documentation; and complete characterization of remaining liquids and solids in the 11 underground tanks.

Rocky Flats

- Remove and ship remaining plutonium metals, oxides, and residue.
- Begin stabilization and hazard removal in two TRU waste buildings.

Savannah River

- Permanently close tanks 18 and 19, completing the closure of the first tank grouping.
- De-inventory spent nuclear fuel from the Receiving Basin for Off-site Fuels.
- Complete treatment of the aqueous portion of the plutonium-uranium extraction (PUREX) waste at the Saltstone Facility.
- Produce 250 canisters of vitrified high-level waste.

Accelerate cleanup results.—To accelerate cleanup, 18 sites have developed Performance Management Plans (PMPs), which identify strategies, end states, end dates, key milestones, and commitments that facilitate accelerated cleanup and site closure. These PMPs were developed in collaboration with our state and federal regulators.

For fiscal year 2004, several examples of sites' milestones for accelerated cleanup are:

Brookhaven National Laboratory

- Submit Brookhaven Graphite Research Reactor Draft Record of Decision to our regulators to determine the final end-state for Brookhaven Graphite Research Reactor.
- Complete construction of the Airport/Long Island Power Authority Groundwater Treatment System.

Hanford

- Complete cocooning of the H Reactor.
- Complete excavation/removal of 100 B/C Process Effluent Pipeline.
- Dispose of 500,000 tons of remediation waste from waste sites and burial remediations in the Environmental Restoration Disposal Facility.

Idaho

- Begin shipment of RH TRU waste offsite (6-year acceleration) supporting completion of shipments by 2012.
- Complete cleaning and grouting of second pillar and panel vaulted tank, supporting acceleration of tank farm facility closure by 4 years to 2012.

Lawrence Livermore National Laboratory—Livermore Site

- Construct, install, and operate a new treatment system to address groundwater contamination.

Los Alamos National Laboratory

- Permanently dispose of over 600 cubic meters of legacy TRU waste through an integrated strategy of segregating, decontaminating, and shipping to the Waste Isolation Pilot Plant (WIPP).
- Complete shipment of 2,000 drums and initiate retrieval of legacy TRU waste stored below grade.

Nevada Test Site

- Complete remediation of 55 release sites.
- Continue to dispose of low-level waste from complex-wide generators in support of closure of other EM sites.
- Continue characterization and shipments of TRU waste to WIPP.

Oak Ridge

- Complete East Tennessee Technology Park K 29/31/33 decommissioning for re-use (one-year acceleration), supporting closure of the site 8 years earlier than planned.
- Complete Molten Salt Reactor Experiment flush salt removal, and complete fuel salt removal from the first of two drain tanks.

Pantex

- Continue pump and treatment of the perched groundwater and evaluation of more efficient cleanup technologies to mitigate the contaminated plume.
- Complete demolition of Zone 10 ruins and initiate actions for the demolition of Building 12–24 Complex.

Savannah River

- Eliminate low-level waste legacy inventory.
- Complete major remediation projects in the testing and experimental areas.

WIPP

- Increase carrier capacity from 25 to 34 shipments of TRU waste per week.
- Procure 11 RH trailers for a total of 14.
- Complete TRUPACT-II (a transportation container to safely transport either TRU waste or standard waste boxes) fabrication to obtain fleet of 84 TRUPACTs.

Maintain closure schedules.—Three major sites, Rocky Flats, Fernald, and Mound, have accelerated closure schedules. In addition, two smaller sites, Ashtabula and Battelle-Columbus are scheduled to close in 2006. Funding in the fiscal year 2004 budget will allow these sites to remain on track toward project completion and site closure.

At Rocky Flats, fiscal year 2004 funding provides for:

- Disposing of more than 109,000 cubic meters of low and mixed low level waste.
- Disposing of more than 8,600 cubic meters of TRU waste (70 percent complete).
- Completing the decontamination and decommissioning of 72 work sets in Buildings 371, 717, 771, and 776.
- Cleaning 194 environmental release sites (81 percent complete).

At Fernald, fiscal year 2004 funding provides for:

- Treatment and shipment offsite of 150,000 tons of waste pit material, which cumulatively represents approximately 80 percent of the total.
- Construction completion of Silos 1, 2, and 3 retrieval facilities.
- Completion of D&D of Plant 1 Complex Phase II, Liquid Storage Complex Phase II, and Pilot Plant Complex.

At Mound, fiscal year 2004 funding provides for:

- Continued removal of high concentrations of tritium from Tritium Effluent Reduction Facility to allow for early shutdown.
- Completion of soil excavation phase of Potential Release Site 66 and completion of the total remediation of Potential Release Sites 68 and 267. These three Potential Release Sites represent 38 percent of the total soil remediation remaining.

At Ashtabula, fiscal year 2004 funding provides for:

- Complete disposal of 100 percent of building remediation debris generated in fiscal year 2003.
- Initiation of excavation and shipment of remaining estimated known scope (i.e., 38,000 tons) of contaminated soil to a licensed disposal site.

At Battelle-Columbus, fiscal year 2004 funding provides for:

—Demolition of buildings JN-2 and JN-3.

Integrate technology development and deployment.—An integrated technology development and deployment program is an essential element for successful completion of the EM cleanup effort and for fulfilling post-closure requirements. The EM Technology Development and Deployment (TDD) program provides technical solutions and alternative technologies to assist with accelerated cleanup of the DOE complex.

Through the fiscal year 2004 budget, EM technology development and deployment investments are focused on high-payoff site closure and remediation problems through a two pronged approach: Closure Projects and Alternative Projects.

Closure Projects.—Principal near term closure sites (such as Rocky Flats, Fernald, and Mound) will be provided with technical support and quick response, highly focused technology development and deployment projects. The goal is to ensure that accelerated site closure schedules are achieved.

—At Rocky Flats and the Ohio closure sites, technical assistance teams will assess critical technical issues and provide technology alternatives including the treatment and disposition of orphaned waste streams.

—At Mound, innovative technologies will be developed to determine and enable treatment of radioactive contaminated soil beneath buildings.

—At Fernald, the vacuum thermal desorption demonstration will be completed to provide a technical solution for an orphaned waste stream.

Alternative Projects.—Alternative approaches and step improvements to current high-risk/high cost baseline remediation projects are our second focus. The goal is to enable cleanup to be accomplished safely, at less cost, and on an accelerated schedule. EM is focusing funds for fiscal year 2004 on:

—Alternatives for Tank Waste Immobilization;

—Alternatives for Carbon Tetrachloride Source Term Location;

—Alternatives for Remediation of Leaked High-Level Waste Below Tanks;

—Alternatives for Disposition of High-Level Salt Waste;

—Alternatives for Immobilization of High-Level Sludge Waste;

—Alternatives for Remediation of Chlorinated Ethenes Using Monitored Natural Attenuation;

—Alternatives for Deposit Removal at Gaseous Diffusion Plants;

—Alternatives for Cleanup of Trichloroethylene under Buildings (Paducah); and

—Alternatives for Expedited Processing of Scrap Metal/Equipment.

CONCLUSION

We planted the seedlings of transformation one year ago. We have fostered and guided the reforms. New ideas and breakthroughs have grown from looking beyond the paradigm of risk management to the new focus of accelerated risk reduction and cleanup. New strategies and plans are thriving.

We are experiencing the realization that for the first time, the goal of completing EM's mission is within our grasp. We have set into motion a reformed cleanup program—one designed and managed to achieve risk reduction not just risk management; to shift focus from process to product; and to instill the kind of urgency necessary to clean up and close down the nuclear legacy of the Cold War and to protect human health and the environment.

We are at a turning point for this program. We must not lessen our resolve. I ask for your support to continue this important work. We must avoid passing this intolerable inheritance to our children. Accelerating cleanup by at least 35 years and saving over \$50 billion is a wise investment for our children's future.

I look forward to working with Congress and others to achieve this goal. I will be happy to answer questions.

Senator DOMENICI. Thank you very much. Dr. Chu.

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

STATEMENT OF MARGARET S.Y. CHU, DIRECTOR

Dr. CHU. Mr. Chairman Domenici, Senator Reid and Senator Cochran, as the Director of the Department of Energy's Office of Civilian Radioactive Waste Management I appreciate this opportunity to appear before you today. I have a more detailed statement, and with your permission I will submit it for the hearing record.

One year ago, I had the privilege of becoming the fifth appointed director of this office and the first one since the President and the Congress approved Yucca Mountain as the site to be licensed and developed as the world's first repository for spent nuclear fuel and high-level waste.

In assuming the director's position at that critical time, I realized that I had four significant challenges: First, to transition the Federal and contractor organization from a focus on-site investigation to an enterprise with the culture of nuclear safety essential to obtain a license from the Nuclear Regulatory Commission and successfully construct and operate a repository.

Second, to work with the Congress in developing the means of assuring stable funding needed to meet the formidable schedule for the licensing and development of the repository.

Third, to create a safe and secure transportation infrastructure needed to move nuclear waste and spent fuel from over 100 locations across the United States.

And finally, to challenge our scientists and engineers to find new and creative ways to enhance the operational safety and certainty and reduce the life cycle cost of the program.

The President's fiscal year 2004 budget request reflects these changes I have implemented, and I appreciate the opportunity to present it to you today. With the formal designation of Yucca Mountain last year, our office prepared a detailed plan that will allow us to submit the license application by December 2004 and to begin placing waste in a licensed repository in 2010.

Both the Continuing Resolution and the reduction of \$134 million from our fiscal year 2003 request will force us to reduce, eliminate, or defer some of the work we had planned, thus significantly increasing the risk of not meeting our program goals. We are currently finalizing our analysis of the impacts and will provide you with more detailed information after we have completed consulting with the Department.

The schedule is extremely tight, and delays are costly to our Government and more importantly the American taxpayers. For every year of delay beyond 2010 the cost of storing and handling just defense waste is estimated to increase by \$500 million, and this figure does not include potential claims for damages resulting from the Government's failure to accept commercial spent nuclear fuel since 1998.

In the President's fiscal year 2004 budget, we have requested \$591 million for the program. As importantly, the administration will propose, in discussion with the Congress, a discretionary budget cap adjustment for the Yucca Mountain program as a provision to the Budget Enforcement Act reauthorization.

Beyond fiscal year 2004 our program will need significantly increased funding for the design, construction, and operation of the repository, as well as the transportation infrastructure. This proposed cap adjustment will allow the Appropriations Committee to provide sufficient funding for the program's needs without adversely affecting other priorities. This will provide us with a greater certainty of funding and ensure the proper and cost-effective planning and acquisition of capital as that is required for such a major capital project.

I now would like to provide you with some highlights of our fiscal year 2004 request. We will focus most of these funds and efforts on completing and submitting a license application to the NRC and accelerating work on developing a national and a Nevada transportation system. Let me briefly discuss these efforts.

The repository development activities constitute over 70 percent of our funding request. The main focus will be on completing the technical product required for a license application. As part of the license application preparation we will respond to key technical issues agreed upon between DOE and NRC, complete required elements of the design for the waste package surface and subsurface facilities, complete a preclosure safety analysis, and then a post-closure performance assessment of the repository system.

In addition, all of the documents from years of scientific studies that support a license application must be loaded into an electronic web-based licensing support network and be certified at least 6 months before the license application is submitted.

Also, as part of the repository development, I am requesting \$25 million for a new cost-reduction and systems-enhancement program. This program is focused on improving existing technologies and developing new ones to achieve efficiencies and savings and to increase our confidence in the long-term performance of the repository. Funding of this program will play a key role in our current efforts and also achieve near-term cost savings and reduce the total system life cycle cost.

For the transportation activities we are requesting \$73 million. We will begin the initial procurement of the cask fleet and place orders for long lead-time casks and equipment. Additionally, we will prepare for acquisition of transportation logistics services and assess other needs. Requested funding also supports greater interactions and dialogues with regional State and local organizations to address important transportation issues such as emergency response.

Of the \$73 million requested in the transportation program, about a quarter will be used to examine the development of a Nevada rail line to the repository. If a decision is made to pursue rail transportation, the Department must carefully analyze the environmental impacts of constructing a rail line within a particular corridor. Pending the outcome of this process, we will begin conceptual design activities, conduct field surveys, and pursue obtaining right-of-way. We will also continue to assess the viability of other transportation modes.

PREPARED STATEMENT

These are the highlights of the 2004 fiscal year budget for my office. In conclusion, our program is a key element of the Department's and the administration's efforts to advance energy and national security, contribute to homeland security, and honor our environmental commitments. We now have the unique and historic opportunities for moving far closer to solving the nuclear waste problem by beginning, hopefully in less than 8 years, to move waste underground in the world's first licensed geological repository. I urge your support for our budget request and look forward to working with you on this vital national issue.

I would be pleased to take any questions that the committee has. Thank you.

Senator DOMENICI. Thank you. Your statement will be made a part of the record.

[The statement follows:]

PREPARED STATEMENT OF DR. MARGARET S.Y. CHU

Mr. Chairman and members of the Committee, I am Margaret Chu, Director of the Department of Energy's Office of Civilian Radioactive Waste Management. I appreciate the opportunity to present our fiscal year 2004 budget request and discuss our plans to license, build and operate a geologic repository at Yucca Mountain, Nevada, and our efforts to develop the transportation system needed to deliver the nuclear waste to the repository.

The mission of the Civilian Radioactive Waste Management Program is to implement our Nation's radioactive waste management policy. The policy, as established by the Nuclear Waste Policy Act of 1982, as amended, requires permanent geologic disposal of commercial spent nuclear fuel and high-level radioactive waste resulting from the Nation's atomic energy defense activities. This waste must be safely isolated to protect human health and the environment. The disposal of this waste in a geologic repository is also required to maintain our energy options and national security, to allow a cleanup of our weapons sites, to continue operation of our nuclear-powered vessels, and to advance our international non-proliferation goals. The Department's consolidation of spent nuclear fuel, and high-level waste from 131 sites in 39 States and the safe disposal of them at Yucca Mountain is vital to our national interest.

The Program made significant progress in fiscal year 2002 toward implementing the national radioactive waste management policy. In February, the Secretary of Energy completed his review of our site characterization work and recommended the site to the President. This past summer, on July 9, 2002, Congress demonstrated its continued support for a geologic repository by approving Yucca Mountain as a suitable site for repository development, Public Law 107-200. The President signed this bill on July 23, 2002. As a result, the Program is focusing its near-term efforts on seeking a license to construct a Yucca Mountain repository from the Nuclear Regulatory Commission (NRC). We thank you for your strong bipartisan support of this important effort.

THE 2010 OBJECTIVE

The Program's key objective remains to begin receiving and emplacing waste at a NRC licensed Yucca Mountain repository in 2010. To achieve that objective the Program must, in less than eight years, seek and secure authorization to construct the repository, begin constructing the repository, receive a license to operate the repository, and develop a transportation system to take waste from civilian and defense storage sites and ship it to the repository. That is an extremely tight schedule.

To construct a repository by 2010, the Program must have a construction authorization no later than 2007. To have that authority by 2007, the Program must submit a high quality and defensible license application no later than 2004 since the NRC will require at least three years to consider the application. And because we have deferred critical work on transportation in the past, we must begin an accelerated effort to develop the transportation system.

Meeting the 2010 objective will also require far greater resources than the Program has thus far received. We estimate, for example, that it will cost about \$8 billion—more than 80 percent of the budget required to meet the 2010 objective—to construct the repository and develop the transportation system. That would average more than \$1 billion a year—much higher than our previous annual appropriations.

THE FISCAL YEAR 2004 BUDGET REQUEST

Our budget request for fiscal year 2004 is \$591 million. The Program will not be able to meet the 2010 objective should funding fall below this level. The schedule, as I have said, is extremely tight and delay is costly. For every year of delay beyond 2010, the cost of storing and handling Departmental defense wastes alone is estimated to increase by \$500 million. Regarding the nuclear utilities, the government's liability for damages for not beginning to take commercial spent fuel in 1998 already has been established by court decisions. While an accurate calculation of damages must await determinations by the courts, it is not unreasonable to assume that the amount of damage will be significant and will increase with each year of delay.

To set the stage for our fiscal year 2004 budget request I would like to briefly describe our fiscal year 2002 accomplishments, our ongoing activities based on our fiscal year 2003 appropriation, and our goals for fiscal year 2004.

FISCAL YEAR 2002 ACCOMPLISHMENTS

Yucca Mountain.—The Program completed nearly 20 years of site characterization activities investigating the natural processes that could affect the ability of a repository built underneath Yucca Mountain to isolate radionuclides from spent nuclear fuel and high-level radioactive waste. These investigations showed that a repository at Yucca Mountain can provide the reasonable expectation required by the NRC that public health and safety, and the environment will be protected. The underlying basis for our investigations and engineering designs has withstood many independent scientific peer-reviews and thorough examination by national and international oversight organizations. Our site characterization investigations and analyses clearly demonstrate that a repository within Yucca Mountain will meet the Environmental Protection Agency's site specific standards.

The Department also developed a Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada. During preparation of the Environmental Impact Statement, the Department held 66 public hearings in counties in the vicinity of Yucca Mountain to inform residents of the area of the possible recommendation and to gather their views and comments.

FISCAL YEAR 2003 ON-GOING ACTIVITIES

With the formal designation of Yucca Mountain as the site for repository development, the Program prepared a conceptual design and a detailed plan for repository licensing, construction, and operation. The goals of this plan are to submit the license application to the Nuclear Regulatory Commission by December 2004, and to begin receiving waste at Yucca Mountain in 2010. Our fiscal year 2003 and fiscal year 2004 budget requests were consistent with this plan. The limited funding provided during the continuing resolution, which was 10 percent below our fiscal year 2002 level for the first 5 months of fiscal year 2003 and the final fiscal year 2003 appropriation of \$457 million, which is \$134 million, or 22 percent below our request, required us to replan our activities. While we are trying to maintain the license application submittal date of December 2004, some important planned work must be reduced, eliminated or deferred, thus significantly increasing the risk that we will be unable to meet our Program goals. Our request for fiscal year 2004 is essential if the Department is to prepare a defensible license application for submission in 2004 and meet our other Program goals.

The Administration also plans to submit a proposal to withdraw permanently from settlement, sale, location or entry under some or all of the general land laws certain lands comprising and contiguous to the Yucca Mountain geologic repository operations area. It is necessary to initiate this proposal now in order to ensure that we satisfy Nuclear Regulatory Commission licensing requirements and maintain the territorial integrity, security and isolation of the site.

Yucca Mountain.—The Program is now focusing its efforts on completing our license application to the NRC for authority to construct the repository. By the end of fiscal year 2003, the Yucca Mountain Project expects to meet the following goals and objectives:

- Advance the preliminary design of the repository surface and underground facilities and waste package elements, beyond the current conceptual design, sufficient for the development of the license application.
- Complete additional materials testing and analyses required to support the license application design for waste package, surface and subsurface facilities.
- Complete testing data feeds for the Total System Performance Assessment Postclosure Report in the license application.
- Initiate the development of selected license application chapters and sections, currently estimated at approximately 10,000 pages in total.
- Process the majority of the Project records and technical documents for inclusion into the licensing support network (numbering in the millions of pages).
- Implement management improvements identified in the President's management agenda.

Transportation Program.—With the fiscal year 2003 enacted appropriation, only very limited activities will be performed toward developing the transportation system, since resources will be focused on repository licensing activities. A number of critical steps toward developing a transportation system ready to ship waste in 2010 will be initiated. As the Department has promised, we will issue a National Trans-

portation Strategic Plan by the end of this fiscal year. The plan will address policies, interactions with States, local and tribal governments, identify necessary activities and describe our approach to having an operational transportation system in place by 2010. We will complete the procurement strategy for waste acceptance and transportation services and equipment. We will write a concept of operations document and will evaluate transportation operating scenarios to guide the development of the transportation system. We will not be in a position to support the full-scale cask tests at Sandia National Laboratories proposed by the Nuclear Regulatory Commission.

PROGRAM MANAGEMENT AND INTEGRATION

A Program whose objective is to begin constructing and operating a licensed repository and a transportation system in a relatively short period of time is very different from a Program whose objective is to investigate a site. It must be both structured and managed differently. And because budgets as well as demands and schedules are tight, it must be structured and managed both to meet the highest standards of performance and to be as efficient and cost-effective as possible.

During this fiscal year, we have taken several initial steps to turn this program into a project-oriented organization that is focused on managing major capital projects efficiently and cost-effectively. Our organizational realignment in November 2002 created an Office of Repository Development, headed by the Deputy Director of OCRWM, and provided that organization with a substructure that will enable it to successfully manage the challenges of designing and licensing the repository. Through management improvement initiatives I have directed, we are meeting the commitments to the NRC to improve in five areas: to better define roles, responsibilities, authority and accountability; to strengthen our Quality Assurance program; to streamline procedures at the project; to enhance our Corrective Action Program; and to implement a Safety Conscious Work Environment that requires openness and identification of potential safety issues without fear of reprisal. These actions will better position us to be a successful NRC licensee and to meet mandated requirements for a safely operating repository.

FISCAL YEAR 2004 KEY ACTIVITIES

As I indicated previously, the Office of Civilian Radioactive Waste Management Program's budget request is \$591 million in fiscal year 2004. This is essentially level with our original fiscal year 2003 request, but \$134 million below the enacted level. Out of our total budget, the amount requested for Yucca Mountain in fiscal year 2004 is \$419 million. However, funding for Yucca Mountain under the fiscal year 2003 enacted level is \$109 million below the original fiscal year 2003 request.

The amount requested in fiscal year 2004 for National and Nevada Transportation activities increases from \$10.4 million, fiscal year 2003 enacted, to \$73 million. However, our fiscal year 2003 enacted level is over \$19 million below the original request. The significant increase in funding for National Transportation in fiscal year 2004 will fund the procurement of long-lead transport casks and auxiliary equipment and accelerate operational capability. Funding for the acquisition of certain cask systems not under development by industry is necessary in fiscal year 2004 to allow the initiation of cask fleet procurement. This critical procurement will facilitate waste acceptance in the post-2010 time frame.

A total of \$18 million is required in fiscal year 2004 to initiate the development of a Nevada rail line from the national rail system to the Yucca Mountain repository. In fiscal year 2004, the program will initiate conceptual design activities, conduct environmental and geotechnical field surveys, and prepare a land acquisition case file required by Bureau of Land Management (BLM). Additionally, the Department will continue to assess the viability of other modes of transportation for shipments to the repository.

Yucca Mountain.—Consistent with Departmental and Program objectives, the Yucca Mountain Project's main focus in fiscal year 2004 will be on completing the technical products required for a license application for construction of the repository. The design, performance assessment, safety analyses, and technical data in the license application must be sufficient for the Nuclear Regulatory Commission to conduct an independent review and reach a decision to issue a construction authorization. The application must demonstrate that the repository can be constructed and operated with reasonable expectation that the health and safety of the public will be protected for at least 10,000 years.

The license application will include a description of site characteristics; waste package, repository surface and subsurface designs; the basis for development of operations and maintenance plans for surface and subsurface facilities; results of a

preclosure safety analysis for the period prior to permanent closure; results of the total system performance assessment for the postclosure period; and a discussion of how the proposed waste package and repository will comply with applicable regulatory requirements. It also will include a discussion of the bases for development of safeguards, certification, and physical security plans and descriptions of the quality assurance program, test and evaluation plan for the development and operation of the repository, and required performance confirmation programs. The license application is expected to be approximately 10,000 pages. The documents referenced by or supporting the license application, in addition to other relevant documentary material, will be made available to the Nuclear Regulatory Commission in electronic format through a licensing support network. In accordance with the Nuclear Regulatory Commission's regulation, 10 CFR 2, Subpart J, the available relevant material must be loaded into the licensing support network and certified at least 6 months before the license application is submitted.

The license application must present a defensible position that the repository can be constructed, operated, and closed without unreasonable risk to the health and safety of the public. The Nuclear Regulatory Commission has issued a site-specific licensing regulation (Title 10 of the Code of Federal Regulations Part 63, or 10 CFR 63) that is risk-informed and performance-based. It requires the Department of Energy to demonstrate in the license application that the repository will meet the specified performance objectives while it is being operated (preclosure) and after it is closed (postclosure).

In fiscal year 2004, with the funds identified in our budget request, we will:

- Respond to major Nuclear Regulatory Commission “key technical issues” necessary to support the license application. These are issues that NRC has asked the program to address prior to license application submittal.
- Complete the electronic Licensing Support Network (LSN) and certification consistent with the requirements of 10 CFR Part 2, Subpart J, at least 6 months prior to submitting the license application.
- Complete required elements of the preliminary design for the waste package, surface facilities, and subsurface facilities, in support of the license application to the Nuclear Regulatory Commission.
- Complete the safety analyses for Department-owned spent nuclear fuel and high-level radioactive waste, and Naval spent fuel for the license application.
- Complete the development and Yucca Mountain Project internal review of five license application chapters for submittal to the Nuclear Regulatory Commission for authorization to construct a repository.
- Complete the total system performance assessment postclosure report in support of the license application. This report will reflect increased understanding of how emplaced nuclear waste will interact with the natural and engineered barriers after the repository is closed.
- Complete a draft of the license application for submittal to the Nuclear Regulatory Commission.

Even though site characterization is complete, in fiscal year 2004 we will continue to collect valuable scientific information for our Performance Confirmation baseline, which is required by the NRC for our license. The NRC requires Performance Confirmation to continue until the repository is permanently closed.

As specified in the Nuclear Waste Policy Act, we are providing funding for payments-equal-to-taxes to the State of Nevada and Nye County, Nevada; Yucca Mountain is located in Nye County. We are also providing funding to the University System of Nevada and to Nye County and Inyo County, California for independent scientific studies. No funding is identified in fiscal year 2004 for the Affected Units of Local Government because the scope of work is yet to be defined. Fiscal year 2003 is a transition year and DOE will review on-going activities to determine which should continue as we enter the licensing phase. We will be working with the State and counties in the next few months to restructure their work and participation.

COST REDUCTION AND SYSTEM ENHANCEMENT THROUGH SCIENCE AND TECHNOLOGY

The planned design for any facility is always based on currently available technology, and the geologic repository is no exception. Given a repository's long time horizon, technical developments that mature in the future might well improve upon the repository's current design in ways that reduce costs of out-year operations. Therefore, we have not only a duty to take advantage of current technical advances, but also an opportunity to foster the development of new technologies that hold greatest promise.

We have initiated a new Cost Reduction and System Enhancement program in fiscal year 2003 and are requesting \$25 million for it in fiscal year 2004. This pro-

gram's objectives are to improve existing, and to develop new, technologies to achieve efficiencies and savings in the waste management system, and to increase our understanding of repository performance. The program will enable us to ensure technical excellence and develop new technologies; maintain our leadership in nuclear waste management; and keep abreast of emerging technical developments both here and abroad so that we can use them in enhancing performance, lowering costs, and maintaining our schedule.

NATIONAL TRANSPORTATION AND WASTE ACCEPTANCE PROGRAM

To develop a system ready to begin shipping waste in 2010, the program will accelerate efforts that were delayed during the site characterization period as a result of funding constraints. The Administration is requesting \$73.1 million for this work in fiscal year 2004. We plan to begin the initial procurement of the cask fleet and to place orders for long-lead time transportation cask systems and equipment as soon as possible. The contracts will be multi-year, thus requiring full funding before they are awarded. We will focus first on those transportation cask designs that have not been previously developed by industry and will be required for transportation. We will also prepare for the acquisition of transportation and logistics services, determine the approach for performing cask maintenance, develop initial site specific service plans in consultation with the utilities, and develop facility and equipment needs assessments for waste acceptance at DOE's defense waste sites.

Funding in fiscal year 2004 will also support greater interactions with regional, State and local organizations to address institutional and technical transportation operations issues, including development of a final grant process for providing emergency responder assistance under the Nuclear Waste Policy Act to States and tribal governments.

Of the \$73.1 million requested, \$18 million would be for activities associated with developing a waste transportation infrastructure in Nevada. The activities supported in this request are critical to achieving our goal of waste acceptance in 2010. We will continue to assess the transportation options for shipments to the repository. However, the national rail system has been used for the last 25 years to ship radioactive waste safely across the country. No rail link exists between the national rail system and the Yucca Mountain site. If developed, a rail line between the existing rail system and Yucca Mountain would cost an estimated \$300 million to \$1 billion, depending on the corridor and alignment proposed. Along with other transportation systems, the Final EIS for Yucca Mountain examined five potential rail corridors in the state of Nevada that could be used as transportation routes to the repository. If a decision is made to pursue rail transportation and to proceed with an alignment selection within one of the corridors, the Department must analyze the environmental impacts of constructing a rail line within that corridor. We will initiate consultation to solicit input prior to the development of documentation on a specific rail alignment in Nevada.

In fiscal year 2004, pending the outcome of the NEPA process, the Program would initiate the conceptual design process, develop the draft EIS for a rail alignment, and initiate the land acquisition planning.

Also, the program is working closely with the Office of Environmental Management on DOE spent nuclear fuel and high-level waste acceptance criteria to ensure we have an integrated, timely, and cost-effective approach.

PROGRAM MANAGEMENT AND INTEGRATION

Our fiscal year 2004 request includes \$23.7 million for program management and integration activities, an increase of \$4 million over the fiscal year 2003 enacted level, nearly all of which is devoted to the Quality Assurance program. The request reflects the need to have the strongest possible nuclear Quality Assurance program as we move into the licensing phase. Quality Assurance is the cornerstone of assuring the NRC that the Program has implemented activities related to radiological safety and health and waste isolation that are required by NRC regulations. We will continue to implement the management improvement initiatives that we are beginning in fiscal year 2003 to meet NRC expectations for a licensee.

PROGRAM DIRECTION

The program is also requesting \$75.1 million to support Federal salaries, expenses associated with building maintenance and rent, training, and management and technical support services, which include independent Nuclear Waste Fund audit services and independent technical analyses. These resources fund a small increase in Federal staff to manage repository design/licensing activities and national trans-

portation initiatives and are essential to enable the Program to meet the goal of submitting a license application in 2004.

Alternate Financing Proposal.—In fiscal year 2004 and beyond, the Program will need significantly increased funding to pay for the design, construction and operation of the repository, and the transportation infrastructure. Much greater certainty of funding is needed for such a massive capital project to ensure the proper and cost-effective planning and acquisition of capital assets. The Administration has indicated that, as part of a comprehensive discretionary cap proposal, discretionary cap adjustments for nuclear waste disposal activities will be proposed in the upcoming discussions with Congress on extensions to the Budget Enforcement Act. This proposal would provide adjustments for spending above an enacted fiscal year 2003 appropriation base level of funding in fiscal year 2004 and fiscal year 2005 for the program. These adjustments would be expected to be continued with each reauthorization of the Budget Enforcement Act until the repository facility is completed.

I want to emphasize that, under these proposed adjustments, the Program would continue to be subject to the annual appropriations process and Congressional oversight. These adjustments would allow the Appropriations Committees to continue to evaluate our annual budget requests on their merits and to provide funding sufficient for the program's needs without adversely affecting other Congressional spending priorities.

CONCLUDING REMARKS

We have reduced the near-term costs to construct the repository facilities required to receive initial shipments of nuclear waste by phasing the development of the repository while maintaining the overall acceptance schedule.

We are aggressively pursuing ways to lessen the life cycle costs of the repository, and are instilling a safety conscious work environment and project organizational approach in the Program to meet our near and long-term goals effectively and efficiently.

We are examining ways to remove waste from the nuclear power plants sooner, once the repository is opened.

Our Program is a key element of the Department's and the Administration's efforts to advance energy and national security through science, technology and environmental management. It plays an important role in contributing to our homeland security, and honors our commitment to a clean environment for future generations. We need your help to get on with this effort, and to perform at the highest level without further delays. We urge your support for our budget request, and we are pleased to be able to work with you on this important national issue.

Senator DOMENICI. Senator Reid.

YUCCA MOUNTAIN LICENSE APPLICATION CHALLENGES

Senator REID. Thank you very much, Mr. Chairman.

Dr. Chu, do you have people that are keeping track of the litigation that is ongoing with Yucca Mountain, and do you have an idea of how many different court proceedings there are in number?

Dr. CHU. Yes. My understanding is the State of Nevada has filed suit against the Department of Energy and has also filed suit against the EPA and NRC, and these suits have been combined, and it is my understanding, the oral arguments will be heard sometime this September.

Senator REID. They are that far away. I note that the General Accounting Office evaluated DOE's progress toward license application in December 2001 and estimated at that time it would take until early 2006 to resolve all outstanding key technical issues to NRC's satisfaction. You would agree with that first sentence I read, would you not? Do you want me to read it again?

Dr. CHU. Since I came on board, we have worked very diligently with our M&O contractor.

Senator REID. What is M&O? What does that mean?

Dr. CHU. Managing and operating contractor, which is Bechtel SAIC, and they recently completed a conceptual design for the re-

pository and developed an estimate, a range estimate of cost and time.

Senator REID. I do not want to be rude. You are reading an answer that there is no question to it. Just listen to this first part of the question, okay. What I said is, I noted that the General Accounting Office evaluated DOE's progress toward the licensing application in December 2001. That is when they did that, and they estimated it would take until early 2006 to resolve all outstanding key technical issues to NRC's satisfaction. Is that a fair statement?

Dr. CHU. No, I do not agree with that statement.

Senator REID. Okay. Tell me what you disagree with.

Dr. CHU. Our plan is, actually I am quite confident that—

Senator REID. No, but—

Dr. CHU. Okay, our plan is we will be able to address—

Senator REID. But the GAO did say that, did they not?

Dr. CHU. I believe so.

Senator REID. Yes, okay. Go ahead.

Dr. CHU. And then as soon as I came on board we did an extensive review of where we were, and concluded we have a schedule that will enable us to address all of the technical issues before submitting a license application. The only things—

Senator REID. When do you expect you will be able to do that?

Dr. CHU. It will be a few months before the license application, so it will probably be a few months before December of 2004.

Senator REID. So that would be about a year-and-a-half or something like that?

Dr. CHU. Right.

Senator REID. Because the reason I mention that, since then only 70 of the 293 outstanding key technical issues have been resolved, and quality assurance is now being questioned by the NRC and the General Accounting Office, and licensing support network is due to be submitted by NRC 6 months ahead of the license application, so you feel that the only obstacle to your progress and ability to meet the license application deadline of 2004 is a lack of funds?

Dr. CHU. Yes, I would say that, because—and let me say a little bit about these key technical issues. We had completed 75—

Senator REID. Okay. I have 70, so you have completed 5 more.

Dr. CHU [continuing]. And we have another 77 in various stages of NRC review, and so we have a very detailed schedule of which ones and when we are going to submit, and we are on schedule right now. There will be 10 out of those 293 that NRC agreed because it takes long-term data collection. These will start to be addressed, but we will not have the answers until after the license application.

TRANSPORTATION PLAN FOR YUCCA MOUNTAIN

Senator REID. When do you expect to release a transportation strategic plan?

Dr. CHU. Our plan is still sometime in 2003, and Senator Reid, part of my problem is because of the funding shortfall we are reassessing the whole program between the repository side and the transportation side.

Senator REID. And do you expect to involve stakeholders in the development of this transportation plan?

Dr. CHU. That is something we talked about. We have not made a decision yet at this point.

Senator REID. Tell me why you would not involve stakeholders.

Dr. CHU. I did not say that.

Senator REID. No, I know. I say, but give me a reason—you say you have not made a decision, but why would you not involve them? What would be the reasons you would not involve them?

Dr. CHU. That is a good question. It probably would be a good idea.

Senator REID. Yes, I think it would be a good idea, don't you? Do you have plans for involving stakeholders in the decision process for selection of a transportation mode, a rail corridor, a final repository design, and these questions you may not be able to answer off-the-cuff, and if you want to do it in writing, that would be fine. You do not have an answer to that right now, do you?

Dr. CHU. There is a bigger question involved around it, because of the funding shortfall, and we had made a decision that the highest priority is going to be our license application delivery. We do have a path forward. We feel confident we can do it. The problem is the funding shortfall, meaning we have to reprioritize the whole program, which inevitably will impact the transportation plan.

Senator REID. But you see, that is the problem that a number of people had, and that is, how can you have a license application if you have not done anything about transportation, because they should be one and the same. You cannot have an application unless you can figure out some way to get the stuff there. It is just not going to appear out of the sky.

Dr. CHU. I agree. That is exactly the challenge I have right now. You see, in the past, every time we get a funding shortfall the transportation program was cut.

Senator REID. But you do not necessarily agree that was a good decision, do you?

Dr. CHU. No. Therefore, what I am doing right now is to plan smartly and strategically so we have an increased chance of success, because every time you stop a program it is wasteful and disruptive. I want to minimize those things and focus on what I need to do in the transportation program that will always be used, given the uncertainty. In short, I want to design a transportation program that provides me the maximum flexibility and maximizes the chance of my success, given the funding disruptions.

Senator REID. My only point is, and I have been saying this for sometime, and others, it is not just me, that we would be better off if we had the transportation studies done before you do the license application, because people think, as I do, that it just is senseless to talk about filing an application if you do not have some way to get the stuff there, so that is a statement, not a question, okay.

Thank you very much for your patience, Senator Domenici. One more question.

NEVADA STAKEHOLDERS SUPPORT

Does the zero budget request that has been presented mean that you will not be working with any of the counties and you will no longer support their commenting on documents or participation at

meetings or assessment of impacts or preparation of data for the licensing support network, or other provisions of information to the citizens? I guess my question is, how in the world could you not have something in your budget that affects State and local governments that are affected?

Dr. CHU. I agree with you. The reason we did not put in any budget request is because 2003 is a transition year from site characterization to licensing, operation, and construction. My goal was to work with the State and the counties and then try to redefine the scope, and then their roles in this next phase, many years to come.

Senator REID. But you cannot do that with no money, can you?

Dr. CHU. My plan is to work with them and then come up with the scope, and then we will come up with the funding, appropriate funding to reflect that scope.

Senator REID. Well, in your statement you said you were reassessing the repository and transportation across the board. What does that mean?

Dr. CHU. Excuse me. Can you rephrase your question?

Senator REID. In your statement you said you are reassessing the repository and transportation across the board. That is in your statement. What does that mean?

Oh, my staff said that is how you answered one of my questions. I thought it was in your statement. You said you are reassessing the repository and transportation across the board. That was your answer.

Dr. CHU. That was a budget question? Was it a budget question? I guess my point is, I only have one program, which is the repository and transportation, so when it comes to budget assessment, priority assessment, I have to look at the program as a whole. That is what I am saying.

Senator REID. And I am saying that you are saying the right thing, but your actions are not. You have got to have the transportation as a part of your program. You cannot just set it to one side. Even though you may not have the money you need, you have to figure out some way to have them so they are both moving along.

Senator Domenici, thank you very much for your patience. I appreciate it.

Senator DOMENICI. You are most welcome, Senator. I note Senator Craig has arrived. Senator, I have not inquired, and I thought I would do that and then yield to you.

Senator CRAIG. I am obviously behind the curve. You go right ahead with your questions, and I may have some at the end of the testimony. I merely came to give these fine ladies support for the cause.

ENVIRONMENTAL MANAGEMENT'S FUTURE YEARS BUDGET PROFILE

Senator DOMENICI. They have testified, and their statements are in the record.

In your written testimony, Ms. Roberson, you indicated that you expect your budget to peak in fiscal year 2005, and then decline to about \$5 billion in 2008. Under the most optimistic scenarios, completion of Rocky Flats, Fernald, and the Mound clean-up in 2006 will save you approximately \$1 billion off your baseline, but by

your testimony today you are indicating that your budget for 2008 will be \$2.2 billion less than it was today.

So I wonder in which activity, sites or otherwise will you find the additional \$2.2 billion in savings, and some of the other sites in the complex were expecting their budgets to increase as a result of DOE's completing its work at Rocky Flats and other clean-up sites. How can you do that in an environment of a budget dropping \$2.2 billion by 2008?

MAJOR ACTIVITIES TO BE COMPLETED BY 2008 AS LISTED IN THE
PERFORMANCE MANAGEMENT PLANS (PMPS)

Ms. ROBERSON. Senator Domenici, the clean-up of the three larger closure sites, Rocky Flats, Mound, and Fernald is clearly a major piece of that. We also have tens of other small projects which amount to, during peak times, about \$600 million that are also scheduled to be completed 2008 or sooner.

In addition, in our performance management plans what we have done is laid out the activities over time, so what you have are estimates for completing the necessary work. So other key activities would also have progressed to the point at some of those sites, that continue to have clean-up, we will have completed certain major activities. I could not go through the specific list, but I would be glad to provide you with an example of those for the record.

Senator DOMENICI. Would you do that, please?

Ms. ROBERSON. Yes.

[The information follows:]

Site/Ops Office	Cleanup Endstates/Endpoints	Activities
Amchitka	Fiscal Year 2003	Completion of subsurface groundwater modeling and risk assessment.
Battelle Columbus (West Jefferson North Site)	Fiscal Year 2005	CRSP independent assessment and DOE groundwater model verification completed.
Brookhaven National Laboratory	End of Fiscal Year 2006	Site completion including demolition of buildings and remediation of radiological contamination.
	Third Quarter Fiscal Year 2005	Completion of groundwater and soil cleanup projects.
	Fourth Quarter Fiscal Year 2008	D&D of HFBR.
Energy Technology Engineering Center	End of Fiscal Year 2008	Completion of EM Program at Brookhaven.
	June 30, 2003	Ship TRU offsite.
	September 30, 2005	Complete RMHF D&D.
Fernald	September 2004	Complete soil remediation and install groundwater remediation system, completion of cleanup program.
	June 2005	Complete disposition of remaining low level waste and mixed waste.
	June 2005	Complete waste pits remedial action.
	June 2005	Eliminate treatment requirement, and transport waste from Silo 3 to Envirocare.
	May 2006	Complete treatment of Silos 1 & 2 waste and transport via rail to Envirocare.
	December 2006	Complete soil excavation and on-site disposal facility construction.
	December 2006	Install needed infrastructure for Great Miami Aquifer restoration.
	December 2006	Complete facility D&D and disposal of D&D debris-site closure.
Hanford	2004	Retrieval and closure of 5 tanks.
	2005	Complete PFP de-inventory.
	2006	Complete removal of K Basin SNF, Sludge, Debris, and Water.
	2006	Retrieve, assay, and disposition 15,000 drums of buried suspect TRU.
Idaho	September 2003	Complete cleaning and grouting of first pillar and panel vaulted tank.
	2004	Complete Pit 9 retrieval demonstration.
	2005	Remediate PBF, CFA, TAN (except groundwater plumes).
	2005	Consolidate SNF from TAN to INTEC.
	December 2006	Complete cleaning and grouting of the remaining pillar and panel vaulted tanks.
	September 2008	Complete construction and readiness review of sodium-bearing waste treatment facility.
Los Alamos National Laboratory	2007	Complete all groundwater protection measures and monitoring.
	2008	Complete corrective actions at the highest priority Material Disposal Areas (landfills).
Lawrence Livermore National Laboratory, Livermore Site ..	Fiscal Year 2006	Ship TRU waste off-site.
	Fiscal Year 2006	Complete groundwater remediation network.
	Fiscal Year 2006	Complete disposition of mixed and low-level waste currently in inventory.
	Fiscal Year 2006	Transfer program to NNSA.
Mound	August 2005	Complete soil remediation of key Potential Release Sites (PRS).
	June 2006	Complete D&D of last 6 buildings.
	December 2006	Site Closure.

Nevada Operations Office	2006	Complete all Off-sites surface closures.
	2007	Complete disposition of all current legacy TRU materials/waste.
	2008	Complete closure of all industrial sites.
Oak Ridge Reservation	2004	ETTP: Complete K 29/31/33 decommissioning for re-use.
	2005	Melton Valley: Ship legacy waste for offsite disposal.
	2005	ETTP: Dispose of legacy waste.
	2006	Melton Valley: Complete remedial actions, site closure.
	2008	ETTP: Complete Zone 1 and Zone 2 cleanup.
	2008	ETTP: Dispose of empty DUF6 cylinders, overpack and transport full and heel cylinders offsite.
	2008	Closure of ETPP.
	2008	Complete cleanup of David Witherspoon 901 and 1630 Sites in Knoxville and the Atomic City Auto Parts site in Oak Ridge.
Pantex	April 2006	Complete interim soil clean up measures.
	October 2006	Complete Ogallala Aquifer groundwater remediation.
	May 2007	Complete facility D&D and footprint reduction.
	September 2007	Complete remediation of Perched Aquifer.
	End of Fiscal Year 2008	Completion of remediation activities.
	April 2004	Regulatory closure process for radioactive waste landfill complete.
	February 2005	CMI complete for chemical waste landfill.
	March 2005	CMI complete for mixed waste landfill.
	April 2004	Regulatory closure process for classified waste landfill complete.
	August 2006	Complete all closure activities for mixed waste and chemical waste landfills.
	August 2006	Complete remaining work for closure of SNL cleanup project B complete all sites.
	September 2006	Complete all environmental restoration activities related to drains and septic systems.
	September 2006	Complete all environmental restoration groundwater activities.
	2006 to 2007	Close F Canyon.
	2007	Complete clean up and release of 90 percent (about 22 acres) of potentially impacted SPRU land areas, return them to Office of Naval Reactors, SNR.
	2007	Complete groundwater cleanup.
West Valley	Fiscal Year 2004	Complete decontamination activities.
	December 2004	Complete construction and operational readiness of Remote Handling Waste Facility.
	Fiscal Year 2005	Begin decommissioning.
	April 2003	Increase WIPP capability to receive 100 TRUPACT—Is and/or Half PACTs per week.
	Second Quarter, Fiscal Year 2005 ..	First receipt of RH—TRU waste.
	Fiscal Year 2005	HWFP modifications for TRUPACT—III.
	Fiscal Year 2007	Begin shipments of TRUPACT—III.
Waste Isolation Pilot Plant		

The out-year funding profile of \$5 billion in 2008 will afford the accomplishment of our accelerated risk reduction and cleanup goals, as noted in the attached table, through the synergistic combination of management reforms, performance management plans, and integrated project management teams.

Senator DOMENICI. Does your outyear funding profile of \$5 billion in 2008 fully fund all of the site performance management plans you have spent the last year negotiating?

Ms. ROBERSON. I believe so, sir.

Senator DOMENICI. Would you confirm that and, if so, would you tell us which ones it does not?

Ms. ROBERSON. I will confirm it in writing, but I can assure you that it is in line with the plan that we have laid out.

LOS ALAMOS ACCELERATED CLEAN-UP PLAN

Senator DOMENICI. Regarding Los Alamos clean-up, the conference agreement on the fiscal year 2003 omnibus provides an additional \$50 million for clean-up at Los Alamos National Laboratory consistent with the lab's performance management plan, that is the PMP. The DOE and the lab must have the agreement of the State on the PMP before the lab can proceed with this accelerated plan, which I support.

A further complication is that last year New Mexico's environmental department proposed rulemaking actions against Los Alamos and Sandia based on a finding of "imminent and substantial endangerment". I understand the order has been stayed until May and the DOE has been negotiating with the State regarding the pending action.

The State continues to push for more analysis and characterization of contamination, while the Department wants to proceed with the clean-up. What happens if the State never comes to an agreement with you regarding the clean-up? Will that impact on your ability to quickly ship waste to WIPP? Are you taking into account special concerns about how this could affect nuclear weapons operations at the laboratory at Los Alamos, and can you give me an update on this situation?

Ms. ROBERSON. Senator, we are working very closely with the National Nuclear Security Administration on this matter, since they manage continuing operation on the site. Your facts are absolutely up to date and correct. The negotiations, we were hoping, would culminate within this week, no later than next week. I am actually going to be going out to New Mexico next week and meet with regulatory agencies there, and hope that we can affirm some further progress.

If we are unable to reach agreement it will not impact our commitment to accelerate the TRU waste movements. We have invested a tremendous amount of energy and effort, working with EPA and NRC to do that, and we think it is in the best interests of New Mexico to proceed. However, the debate over how much characterization of the data is needed is certainly an element that would slow down our accelerated efforts at that site.

Senator DOMENICI. Well, personally I would like very much for you to keep us posted on that. I would think that based upon what I know of your Department's efforts and the efforts through Los Alamos, and we have gone a long way in getting that ready, I would hope there are no additional requirements. Sometimes they come up with them and they are truly ridiculous. Sometimes they come up with them that are realistic, and I would hope you would pass objectively on what they really are all about and let us know.

Ms. ROBERSON. You can count on me to do that, Senator.

SCIENCE AND TECHNOLOGY DEVELOPMENT INVESTMENTS

Senator DOMENICI. Over the last year the Department has dramatically cut its budget request for investment in science and technology development to support clean-up missions. This budget has gone from \$300 million to a request of \$64 million for 2004. That budget is focused on very, very near-term objectives, from what we understand. Why have you abandoned the notion that long-term clean-up costs over the next 30 years could be effectively reduced through aggressive development of the technologies?

Ms. ROBERSON. Well, Senator Domenici, we have not abandoned the idea that our clean-up costs could be positively affected by science and technology. In the fiscal year 2003 budget we proposed, and the Congress approved, transfers the research and development function in the environmental clean-up program to the Office of Science, which we believe allows a more efficient utilization of resources, and we have worked very well with the Office of Science in that venue.

The element of the science and technology program that remains in the EM is really focused on development and deployment of specific initiatives that allow us to benefit from the many technology endeavors undertaken in the last 2 years and tested and developed through the science and technology program, so our efforts now are identifying the issues or problems that we need technologies focused on, and through a competitive arrangement, allow those companies to demonstrate to us the most efficient and effective application of those technologies. We believe we have moved the program to the next step of identifying those best suited for deployment in resolving those specific issues within the program.

WASTE MANAGEMENT EDUCATION RESEARCH PROGRAM

Senator DOMENICI. I have a long series of questions. I am just going to ask two more and then I will yield to Senator Craig.

The Department has had an environmental program going called WERC, W-E-R-C, Waste Management Education Research Program, that involves three universities, headed by New Mexico State. Can you confirm today that DOE will fund WERC consistent with the cooperative agreement and congressional direction?

Ms. ROBERSON. Senator Domenici, I can affirm that we intend to maintain a working relationship with WERC. We are working right now to ensure that the goals for the accelerated clean-up and the timing align with our cooperative agreement with WERC, and we may pursue some modification to that cooperative agreement from a scope perspective, but I believe that I can confirm we will continue to maintain a relationship with WERC and funding for that initiative.

Senator DOMENICI. All right. That was not quite my question, but I will take it as an answer that you will try your very best, consistent with your reevaluation.

Ms. ROBERSON. Exactly.

Senator DOMENICI. Senator Craig.

IDAHO CLEAN-UP

Senator CRAIG. Well, Mr. Chairman, thank you again, and to both of you, thank you for being here. Both of these issues and areas that you have responsibility over are important to our country, and are certainly important to my State.

Jessie, you are obviously by now aware of a court decision in Idaho as it relates to a relationship between Idaho, DOE, and the clean-up on site at Idaho, and how all of that works its way out. I guess instead of asking you if the reality is at hand and we have to fund all that might be suggested by that decision, if you had a figure to propose—my guess is you probably do not—or at least a ball park figure, what I would much prefer to suggest is that at least in my mind, and I hope the State's, this court decision results in DOE and Idaho getting back to the table not only to recognize that there is a responsibility there for clean-up, but the judge argues, if you will, all means all, but more importantly I think, as it relates to the environment, the aquifer, what is the right amount to do that meets the science, that meets the requirements, that clearly might at some time create an environmental risk if it were not exhumed and removed, and that that is really an important way to approach this, than to assume that we are going to cast a budget that over x number of years cleans it all.

I am not quite sure that Congress has that kind of money, or does DOE in this instance, but it is obvious to me now that this may be an opportunity, as much as it is an obstacle, to sit down with the State and work those differences out and to understand that the State and the Federal Government by the judge's decisions in this instance are at least coequal in making determination. Would you disagree with that?

Ms. ROBERSON. I think not, Senator Craig. I would hold myself a step away in that the litigation door is still open. DOE is evaluating its options.

Senator CRAIG. Well, I appreciate the concept of an appeal. I would hope your attorneys would come back and say that when you have a court-ordered environment of the kind you are operating in in Idaho, versus a relationship to contract and commitment in other States, that they are, by definition, somewhat different.

At the same time, I think that that gives us the opportunity to clarify where we need to get in Idaho.

Ms. ROBERSON. Senator Craig, I would say two things. One, I will leave the determination as to legal actions to our attorneys. However, when we did reach settlement on this matter last year, we at that time laid out the clean-up process and timeline for doing just that. Obviously, the first step was the Gem Project, the limited excavation. We are proceeding along that path. We expect to continue to work with the State along that path, but I cannot say what remedies may occur.

Senator CRAIG. I think we are going to assume successes in these projects versus the historic problem we have had that we have worked our way through. I think those successes and the ability to determine that the manifest can be accurately reviewed by exhuming will go a long way toward helping Idahoans understand that we can do this in a way that is scientifically based and re-

solves any problems we might have and that keeps our environment and our aquifer intact.

Ms. ROBERSON. And Senator, that is absolutely our goal, as we have laid out the commitments to demonstrate that. You are right, excavation of all, estimated all, and I am not sure how to define that, is probably well into the double digits of billions. There are other elements to be considered, not just excavation but transportation of that much material. There is a whole school of safety and environmental matters that have to play into the path that is laid out.

YUCCA MOUNTAIN FUNDING ISSUES

Senator CRAIG. Well, thank you for that. We will work with you to try to resolve that issue.

Margaret, again let me thank you for the task you are about. It is obviously important to meet the timelines if we can and must, I think, aggressively try to have an application by no later than 2004. That is aggressive, I do not think there is any question about it, but then to hit the 2007 timeline to be able to be—at least if we can start receiving by 2010, you will deserve a gold medal.

Dr. CHU. Thank you.

Senator CRAIG. We would like to award that to you, or the person who will follow you to this office. I must tell you, though, I am disappointed the administration did not get the budget cap adjustment that it was seeking as a part of the budget resolution this year. I think that would have been very helpful, obviously. The nuclear waste fund is taking in about \$600 million a year, and we have appropriated less than \$100 million for the fund. I will certainly work with you to try to resolve this so we can keep you on schedule from a resource standpoint, at least.

Dr. CHU. Thank you very much, Senator Craig. We need all the support.

Senator CRAIG. Well, I thank you. I do not know that I have any specific questions of you, but this remains an extremely important project for the country. We have been able to get through some of the hurdles. Now we need to get through the rest.

Dr. CHU. Thank you.

Senator CRAIG. Thank you, Mr. Chairman.

Senator DOMENICI. Thank you.

Dr. Chu, I think you know that you are in a difficult position. That goes without saying, but frankly, you are up to it. You have the knowledge and strength to state what it is and how things are as you understand them. Leave the politics and the other things to us. You just do your work as you see it should be done. That is why we ask you to do this job, and we commend you for that.

It is difficult, there is no question, and clearly the State of Nevada, with its wonderful Senators, has a different opinion, it appears, than what the law would have in mind for you to do, and in that regard you will constantly be on a rendering stick, whatever that is. You will be going around and around, and you are not very heavy so you cannot go around too much.

There is not too much to render. In any event, we wish you the best.

SCIENCE AND TECHNOLOGY FUNDING

Over the last years the Department has cut its budget—I am speaking now of science and technology—as far as the clean-up mission. Could I ask, why have you abandoned the notion that long-term clean-up costs over the next 30 years could be reduced by the deployment of new technologies?

Ms. ROBERSON. Sir, we have not abandoned the idea that those costs can be positively affected; and our attempt is to integrate those technologies that have been developed as a result of investments over the last 10 years that they are integrated into the actual demonstration of work in the field, and so we are, through a competitive process, trying to integrate the best of those technologies into our actual work plans.

Senator DOMENICI. Frankly, I thought you were going to say that a quick look at how much money we spent every year for the last 10 years in this area, put up against how much of that technology has proved useful, that you might have arrived at the conclusion that we were wasting a lot of money. Had you said that, I would have agreed with you. You said it differently, but that is all right.

I do not know that we got so much out of the budgets of \$200 million and \$300 million in science and technology towards better ways of controlling this area. Everybody had a new idea. Everybody funded it, but not too much came out of it, so what you are saying is the lower number, you are still picking and choosing the very best, is that correct?

Ms. ROBERSON. Exactly. That is exactly what we are trying to do, out of those 10 years of investment, competitively identifying those that we have funded, and pushing those into the field to actually help solve the problems.

NEW MEXICO ENVIRONMENTAL DEPARTMENT PROPOSED RULEMAKING

Senator DOMENICI. Last year, New Mexico's environmental department issued a proposed rulemaking action against Los Alamos and Sandia, based on the findings of quote, imminent and substantial endangerment. I understand the order has been stayed until May, and that DOE has been negotiating with the State. Can you give me an update on the situation, and do you believe there is imminent and substantial endangerment, to use their words, at Sandia and Los Alamos?

Ms. ROBERSON. Senator Domenici, I do not believe there is imminent safety or environmental threat to the public. The negotiations are ongoing. We were hopeful that they would culminate within the next 2 weeks. I am going to go out myself next week and meet with the regulatory agencies and hopefully find that they are very near culmination.

Senator DOMENICI. Well, I hate to say it, but I do not believe there is either, so we agree for starters. I would hope that they would get serious about this. We do not need any publishing language like this if they do not really have something. We have enough problems when there are serious problems, other than to have somebody bantering them around, so I urge that you move, and move very diligently to see if you cannot rectify this.

On the safeguards and security, just a couple of questions. The Department has a unique and challenging security environment because of the special nature of our mission. Many tons of special nuclear materials are under our control. Security costs throughout the Department have been increasing, particularly in the aftermath of September 11.

The costs to the Department have been going up, and now that our country is at war with Iraq the condition has been raised to an orange level, as the DOE sites refer to, in the security condition 3. As a result, Senator Reid and I, and with help from Senator Stevens last week led the fight here in the Senate to add significant sums to the 2003 supplemental to cover projected heightened security costs that the Department did not budget. What threat level or security condition did you assume in the development of the 2004 budget request?

Ms. ROBERSON. We assumed a SECON 3, which is the, I guess, equivalent to a yellow, and so once elevated to an orange it elevates us to a SECON 2 and does include some additional cost to the program.

Senator DOMENICI. That will not be sufficient, then, if the Department remains at security condition 3 for all of 2004.

Ms. ROBERSON. That is correct. That is an elevated security. We are in an elevated security posture other than we assumed for fiscal year 2003, and if we proceed into fiscal year 2004 it would be the same situation.

SAFEGUARDS AND SECURITY COSTS

Senator DOMENICI. Are there investments that we could make today that would dramatically reduce operational security costs over the next few years, and if you do not know about them now, could you supply them for the record?

Ms. ROBERSON. I know a few, but I would probably like to be a bit more thoughtful.

[The information follows:]

Although we continue to evaluate new barrier and system technologies, the most dramatic reductions in security infrastructure costs are achieved by consolidating materials. As an example, the Rocky Flats security budget request in fiscal year 2004 is \$18 million less than the fiscal year 2003 budget based on the removal of plutonium and highly enriched uranium from the site. Similarly, the disposal of transuranic waste at the Waste Isolation Pilot Plant from 23 locations nationwide will have a significant impact on lowering safety and security costs at those sites.

Senator DOMENICI. Tell us about a few.

Ms. ROBERSON. Obviously, consolidation of material at Rocky Flats has a very positive impact on our security costs. Also, consolidation at Hanford in a limited number of areas, versus where we have material stored now. That is the strategy that we are employing at all of our sites, and then every step you can progress in the consolidation arena brings down your costs. There are obviously also technological actions that can be taken which make sense for longer-term storage versus short term.

Senator DOMENICI. We seem to get rather a good response from the chairman of Appropriations if we bring these issues up. If they are not included in a budget we are able to get them in a supplemental or add them as the bill goes through.

Being at an accelerated level of security is not free. If your budget provides for a different level somebody has to put up the resources, and if you do not have it in there, you take it away from something, and we do not want that to happen when you have a close budget like you have, that you have already negotiated it out pretty thin.

POST CLEAN-UP EMPLOYMENT

Rocky Flats as a model, you often refer to the success of Rocky Flats, and when you talk about what the environmental clean-up program should actually be. Certainly there are lessons to be learned from the DOE experience there. In many ways, the situation was unique in that the plant was relatively small, it was located in a large metropolitan area and provided more job opportunities for displaced workers, and the local community was committed to transitioning the site to a wildlife refuge with very little continuing employment.

This contrasts dramatically with clean-up projects in DOE's communities. That is, in many cases we owe most of their livelihood in the area to the DOE presence and fewer opportunities for displaced workers, and long, or continued high level of DOE employment. That is not to say, having repeated those, that we ought to be liable for all of them, but the truth of the matter is, that is the case.

There are as many or more people involved getting paychecks during the clean-up episode at Hanford and others than there were when they were in full operational scale, and that means that people are growing accustomed to a DOE paycheck. In fact, on the West Coast they are growing accustomed to paychecks in larger numbers for as high a pay as they were getting when all of the reactors were full-steam-ahead in the Scoop Jackson era, and it is very hard for you to make headway when people say, you cannot change the contract because we cannot lower the employment, is that not correct?

Ms. ROBERSON. That is correct. I would say the employment changes as we move forward, we have worked very hard to tie those to completion of the actual work. Unfortunately, this is a program of fixing problems. The problems exist, and our job is to address them, which means at some point you are done fixing the problem.

Senator DOMENICI. You understand why I raise it.

Ms. ROBERSON. Yes.

Senator DOMENICI. Because you are telling us, and we appreciate it, at least you have something going when others had nothing. You have the Rocky Flats model and you are saying, we are using it. I have just given you one big difference, right?

Ms. ROBERSON. Yes.

Senator DOMENICI. Rocky Flats does not anticipate continued employment post-completion, so it will not have as instant a relevance to Hanford, but you are suggesting you are pursuing that vigorously, is that correct?

Ms. ROBERSON. Senator Domenici, you said it absolutely right. One of the clear challenges we have, really, across the country, is the recognition that completing the environmental issues in and of

itself is the thing that opens the door to other economic opportunities, rather than maintaining the clean-up over a longer period of time.

Senator DOMENICI. Okay, and they are beginning to understand that that is going to be the reality?

Ms. ROBERSON. Well, I hope we are effective. That is certainly what we are trying to communicate.

Senator DOMENICI. Well, I think that we are going to support you. I mean, we may get a lot of people that will not, but we have to get there some day or we will never reduce the cost.

Ms. ROBERSON. Well, I think some of the progress that we are making is a demonstration, and I do see an alignment occurring, but it does take time, you are absolutely right. It is a bit more challenging, depending on the circumstances at each site, but it is not applying a cookie-cutter approach, it is applying the logic to the circumstances for each site.

Senator DOMENICI. All right.

Did you have something else?

Senator CRAIG. I was just going to react, Mr. Chairman, by saying in relation to what you need, I am looking at what the INEL was, if you will, in the production era versus in large part now a clean-up era. We were 13,000, now we are 6,000. It seems like the reduction of workforce has not been such an obstacle there. Does it remain that much of an obstacle elsewhere?

Ms. ROBERSON. I would have to say, over the last few years we have evolved. It certainly is an obstacle generically in that the understanding that the environmental clean-up program is a project-oriented program focused on resolving an issue, that if it takes you 30 years to do something it probably is not a good thing for the environment or the public, and that focus and that understanding is not something that has necessarily permeated the entire program.

PRIVATELY FUNDED TECHNOLOGIES

Senator DOMENICI. I have a series of questions regarding Title X of the Energy Policy Act, but I will submit those for the record for you to answer.

Privately funded technology for EM. Let me just ask you, I am aware of at least one company that has put their own money into developing an innovative waste treatment and separation technology, and if it works, could it reduce the cost of tank clean-up at Hanford and other sites? I have noted the President's 2004 budget includes a commitment that DOE will share part of the savings from the development of innovative clean-up technology as an inducement to encourage contractors to take financial risks to develop breakthrough technologies. Is the Department going to encourage such private sector solutions?

Ms. ROBERSON. Senator, I am actually very familiar with this specific technology and venture that you are speaking of. I actually have a team that is going to go out to California and monitor their testing. There is probably another step in their demonstrating the application of that technology to our specific waste, but we are certainly watching, and we are encouraging them to proceed.

Senator DOMENICI. I am not touting it, that technology, but rather the policy.

Ms. ROBERSON. And it is the policy we are deploying in the clean-up program.

Senator DOMENICI. It seems to me to be far more exciting than spending our own money on technology. People might be rather excited if, in fact, they developed one and you gave them this kind of a situation. It might be pretty good.

Senator CRAIG, did you have anything further?

Senator CRAIG. No, thank you, Mr. Chairman.

Senator DOMENICI. Dr. Chu, did you have anything further to say, or comment?

Dr. CHU. I hope in fiscal year 2004 we get the full funding. It is extremely critical for us. The next 12 to 18 months are extremely critical for the viability of the program. I want to reemphasize that, and thank you very much for all your support.

ADDITIONAL COMMITTEE QUESTIONS

Senator DOMENICI. Thank you.

Ms. Roberson, did you have anything further?

Ms. ROBERSON. Senator, I would like to thank you and the subcommittee for the earlier comments on our proposed budget structure and our fiscal year 2004 budget request. That is a critical element of our reforms. It does, indeed, pattern after the actions that were taken for Rocky Flats in 1998–1999. I would be glad to provide any additional information, but it is a critical phase in our reform.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO THE OFFICE OF ENVIRONMENTAL MANAGEMENT

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

ROCKY FLATS MODEL

Question. Ms. Roberson, you often refer to the success at Rocky Flats when you talk about what the environmental clean-up program should be. Certainly there are lessons to be learned from the DOE experience there. However, in many ways the situation at Rocky Flats was unique in that the plant was relatively small, it was located in a large metropolitan area that provided more job opportunities for displaced workers, and the local community was committed to transitioning the site to a wildlife refuge with very little continuing employment. This contrast dramatically with clean-up projects in “DOE communities” that in many cases owe most of their livelihood to the DOE presence, have fewer opportunities for displaced workers, and long for continued high levels of DOE employment.

Are you perhaps too optimistic that the Rocky Flats model will work at many other sites?

Answer. In the 1996 Baseline Environmental Management Report, DOE estimated that it would cost \$17.3 billion and take until 2055 to clean up the Rocky Flats Site. By utilizing an innovative and completion oriented cleanup strategy we were able to reduce cleanup costs to \$7.1 billion and the cleanup will be completed in 2006. The major elements of our cleanup approach at Rocky Flats include:

- insisting on an uncompromising pursuit of top performance;
- creating and implementing a closure “project”;
- implementing an aggressive performance-based; contracting strategy;
- employing innovative project planning and delivery;
- effectively managing human resources; and
- using innovative technology where applicable.

While the situation at the Rocky Flats site was unique in some ways, every site has cleanup circumstances and variables analogous and common to Rocky Flats. I certainly recognize that a “one size fits all” approach to cleanup will not work. How-

ever, I do believe the underlying cleanup strategy that we are using at Rocky Flats is applicable in large measure to other sites as well.

Question. What encouragement can you provide that we will see the same level of progress at other sites such as Hanford, Idaho, and Savannah?

Answer. The cleanup challenges at larger sites such as Hanford, Idaho, and Savannah River are formidable. Nonetheless, the underlying approach we are utilizing at Rocky Flats is applicable to cleanup at all of our sites. In particular, I believe that developing and implementing innovative acquisition strategies that foster accelerated cleanup and risk reduction through the use of performance based incentives is key to improving the effectiveness and reducing the cost of cleanup at our sites. These contracts and the associated performance incentives must be structured around cleanup strategies that aggressively focus on accelerating risk reduction to achieve defined end states. In addition, we have taken a number of reform measures to improve the effectiveness of the Environmental Management (EM) program as a whole. These include:

- developing a new set of corporate performance measures that track progress against cleanup and risk reduction goals;
- restructuring the EM budget to clearly identify the scope and resources that directly support EM's core accelerated mission from those that do not; and
- placing a number of key program elements such as life-cycle costs, contract performance incentives, and site baselines under strict EM Headquarters configuration management control.

I believe that the steps we have taken to reform the EM program will facilitate a high level of confidence that the goals and direction of EM's accelerated cleanup and risk reduction mission will be met.

FUTURE BUDGETS

Question. Your total budget proposal for fiscal year 2004 is approximately \$7.2 billion. In your written testimony, you indicated that you expect your budget to peak in fiscal year 2005 and then decline to about \$5 billion in fiscal year 2008. Under the most optimistic scenarios, completion of the Rocky Flats, Fernald, and Mound clean-ups in 2006 will save you approximately \$1 billion off of your baseline. But by your testimony today, you are indicating that your budget in fiscal year 2008 will be \$2.2 billion less than what it is today. From which sites specifically will you find the additional \$1.2 billion in budget savings?

Answer. The cleanups of Rocky Flats, Mound, and Fernald are clearly a major segment of the reduction in resource requirements. We also have tens of smaller projects across our sites which amount to about \$600 million that are scheduled to be completed by 2008 or sooner. Additionally, other major activities at our large sites, which previously were not scheduled to be completed until after the closure sites, are now scheduled to be completed by 2008 in accordance with our performance management plans.

Question. Some of the other sites in the complex were expecting their budgets to increase as a result of DOE completing its work at Rocky Flats and other closure sites. How will you do that in an environment of a budget dropping \$2.2 billion by fiscal year 2008?

Answer. Prior to the Top-to-Bottom (TTB) Review, the approach was to accelerate Rocky Flats and the other closure sites and re-invest the savings after 2006 in the cleanup of other sites. As a result of the TTB Review, the Department concluded that the cost to accelerate cleanup and risk reduction based on new strategies, with some funding increases over the next several years, would allow work completion earlier than had been previously planned, with an earlier and larger life-cycle savings. This strategy allows for cleanup work to be pulled forward at more sites so that the communities actually benefit faster from a cleaner environment than was previously thought possible.

Question. Does your out-year funding profile of \$5 billion in fiscal year 2008 fully fund all of the site performance management plans you have spent the last year negotiating?

Answer. Yes. We believe with the synergetic combination of management reforms, performance management plans, and integrated project management teams, the out-year funding profile will afford the accomplishment of our accelerated risk reduction and cleanup goals for 2008.

SAFEGUARDS AND SECURITY

Question. The Department of Energy has a unique and challenging security environment because of the special nature of our mission and the many tons of special nuclear material under our control. Security costs throughout the Department have

been increasing for years, and particularly in the aftermath of September 11. And now that our country is at war with Iraq, the security condition has been raised to the "orange level", or as DOE sites refer to it—Security Condition 3. As a result of this, Senator Reid and I, with great help from Senator Stevens, last week led the fight here in the Senate to add significant sums to the fiscal year 2003 supplemental to cover projected heightened security costs that the Department did not budget for.

What threat level or security condition did you assume in developing the fiscal year 2004 budget request?

Answer. The fiscal year 2004 budget request assumes a security condition (SECON) 3 modified threat level, which corresponds to Homeland Security's threat level "elevated/yellow."

Question. Will it be sufficient if the Department remains at Security Condition 3 for all of fiscal year 2004?

Answer. The fiscal year 2004 budget request provides resources for the Department to remain at security condition 3 modified, which corresponds to Homeland Security's threat level "elevated/yellow." If SECON 2 ("high/orange") is implemented in fiscal year 2004, the Environmental Management Program would assess the adequacy of the fiscal year 2004 budget request based on the length of time SECON 2 is in force.

Question. Are there investments we could make today that would dramatically reduce operational security costs over the next few years? If so, please provide specifics for the record.

Answer. Although we continue to evaluate new barrier and system technologies, the most dramatic reductions in security infrastructure costs are achieved by consolidating materials. As an example, the Rocky Flats security budget request in fiscal year 2004 is \$18 million less than the fiscal year 2003 appropriation based on the removal of plutonium and highly enriched uranium from the site. Similarly, the disposal of transuranic waste at the Waste Isolation Pilot Plant from 23 locations nationwide will have a significant impact on lowering safety and security costs at those sites.

WASTE MANAGEMENT EDUCATION AND RESEARCH CONSORTIUM

Question. For almost 12 years the Department has funded the highly successful WERC, the Waste Management Education and Research Consortium, based in New Mexico. WERC has developed an impressive record for training new talent for the EM programs, I fear that the failure to request funding is short-sighted. The fiscal year 2003 Omnibus included direction to the Department to fund WERC at last year's level of approximately \$2.5 million.

Can you confirm today that DOE will fund WERC consistent with the cooperative agreement and the congressional direction?

Answer. We are committed to funding the Waste Management Education and Research Consortium in fiscal year 2003 consistent with congressional direction. Presently, we are working to ensure that the goals for accelerated cleanup and the timing align with our cooperative agreements. Accordingly, we may pursue some modification to our cooperative agreements to ensure needed alignment with the accelerated cleanup goals of the Environmental Management program.

IDAHO REMOVAL OF BURIED WASTE

Question. As you are very much aware, there is a long-running dispute between the DOE and the State of Idaho regarding the removal of buried waste on site at Idaho. The DOE has maintained that it has a responsibility to remove a portion of the waste stored above ground, while the State has argued DOE is on the hook to remove all of the buried waste at Idaho. The resolution of this dispute has major impacts on the clean-up cost and schedule at Idaho. Last week, a Federal judge issued a ruling that raises serious concerns about the Department's chances that the 1995 clean-up agreement will be interpreted as the Department has suggested.

What are the cost and schedule implications at Idaho if the DOE is required to remove all of the buried waste?

Answer. Based on the judge's recent ruling, we believe the current estimate for retrieval, characterization, packaging, and disposal of all the buried waste is at least \$10 billion. The current schedule estimate indicates that the work could not be completed before 2018.

COMPLETION OF CLEAN-UP AT SANDIA

Question. The Department has proposed spending approximately \$22 million for the clean-up of Sandia National Laboratory in fiscal year 2004. Will that level of funding keep Sandia on track for closure in fiscal year 2006?

Answer. Yes, the requested fiscal year 2004 funding will keep Sandia on track to complete the EM mission in fiscal year 2006.

CLEAN-UP SITUATION AT LOS ALAMOS

Question. The conference agreement for the fiscal year 2003 Omnibus provides an additional \$50 million for clean up at Los Alamos National Laboratory (LANL) consistent with the Lab's performance management plan (PMP). Of course, the DOE and the Lab must have the agreement of the State on the PMP before the Lab can proceed with the accelerated plan. Further complicating the situation, last year the New Mexico Environmental Department issued proposed rulemaking actions against Los Alamos and Sandia based on a finding of "imminent and substantial endangerment." I understand that the order has been stayed until May and that the DOE has been in negotiations with the State regarding this pending action. The State continues to push for more analysis and characterization of contamination, while the Department wants to proceed with the clean up.

What happens if the State never comes to agreement with the DOE regarding the clean-up plan for LANL?

Answer. In the event that we are not able to come to agreement with the regulators on an accelerated cleanup path for Los Alamos National Laboratory, we would propose a base funding level as enumerated in the Office of Environmental Management's fiscal year 2003 Congressional Budget Request, escalated appropriately. At this level, we would proceed with cleanup in a non-accelerated fashion. This would allow us to manage risk to protect the public and the environment, but would limit our ability to actually reduce risk, thereby extending the schedule for ultimate cleanup and increasing the life-cycle cost.

Question. Will that impact our ability to quickly ship waste out of LANL to WIPP?

Answer. Yes. Consistent with Section 315 of the fiscal year 2003 Energy and Water Development Appropriations Act, a substantial portion of the fiscal year 2003 budget authority for the Los Alamos National Laboratory is currently unavailable because of the State of New Mexico's failure thus far to endorse the site's Performance Management Plan. This is affecting the Department's ability to accelerate the shipments of transuranic waste to the Waste Isolation Pilot Plant. The significant increase in shipments called for in the PMP requires an early investment in systems to increase the capacity at the LANL to process and ship waste.

Question. Are you taking into the special concerns about how this could affect nuclear weapons operations at Los Alamos?

Answer. The current rate of transuranic (TRU) waste shipments exceeds the rate of TRU waste generation from nuclear weapons activities at the Los Alamos National Laboratory. Consequently, there is no immediate concern that nuclear weapons operations would be curtailed or otherwise adversely impacted because of a lack of waste storage space. There is an estimated 2 years of storage capacity "cushion". As we achieve the commitment in the Performance Management Plan to increase the number of waste shipments, the potential impact to nuclear weapons operations will be reduced even further.

Question. Can you give me an update of this situation? (*Background.*—The Department is proposing that over 2000 drums of legacy transuranic waste will be shipped to WIPP in fiscal year 2004. This is 10 percent of the TRU waste at LANL, much of it stored in tents up on top of a Mesa. You will recall this area was almost burned in the Cerro Grande fire of 2000.)

Answer. The Los Alamos National Laboratory has approximately 46,000 drum equivalents of transuranic waste in storage. The LANL Performance Management Plan, calls for shipping 2,000 drums of the highest-activity and dispersible transuranic waste to the Waste Isolation Pilot Plant by the end of fiscal year 2004. To this end, the U.S. Nuclear Regulatory Commission approved a revised method of meeting certain shipping requirements for this subset of transuranic waste at LANL. The first of these drums was shipped in December, and more drums were shipped in January. This activity is referred to in the LANL PMP as the "Quick to WIPP" plan. In addition, the LANL PMP calls for disposing of all transuranic waste at LANL by 2010. LANL is currently averaging one shipment (42 drums) to WIPP per week. The plan is to increase to two shipments per week in May.

Additional actions have been taken to reduce the risk of fire danger for this waste. Storage dome roofs are being replaced with material having greater fire resistance. Fire loading within the domes has been reduced; for example, wooden pallets have been replaced with metal. Wooden crates containing waste are now being stored in large metal containers; and brush and trees have been trimmed away from the storage areas.

SCIENCE AND TECHNOLOGY BUDGET

Question. Over the last several years, the Department has dramatically cut its budget request for investments in science and technology development to support its clean-up mission. The budget has gone from over \$300 million to a request of just \$64 million for fiscal year 2004—and that budget is focused on very near-term objectives.

Why has the Department abandoned the notion that long-term clean-up costs over the next 30 years can be effectively reduced through aggressive development of new technologies?

Answer. The Office of Environmental Management's cleanup program has not abandoned the notion that long-term cleanup costs over the next 30 years can be effectively reduced through aggressive development of new technologies. EM's cleanup program clearly faces many technical challenges that must be met through improved science and technology as it moves forward to address the cleanup of the nuclear weapons complex. The Department has included in the fiscal year 2004 budget request over \$63 million for critical, high-payback technology development and deployment activities where quantum improvements can be gained, as well as on activities supporting closure sites. The Department has also requested over \$29 million for the Office of Science to support scientific research to address cleanup problems identified by EM. In addition to this science and technology funding, EM is also moving to renegotiate and restructure many of our site contracts to further provide incentives for our contractors to seek out the best possible science and technology solutions to cleanup problems.

TITLE X OF THE ENERGY POLICY ACT OF 1992

Question. What is the level of claims for reimbursement that is currently pending payment by DOE (i.e. through 2001)?

Answer. As of May 7, 2003, the total outstanding balance of approved claims that are eligible for reimbursement pending future appropriation of funds is \$78.5 million. This is the remaining balance after DOE's April 2003 payment to eligible EPACT Title X licensees of its fiscal year 2003 appropriation for this purpose. The outstanding balance reflects unpaid claims submitted by the licensees by May 1, 2002, for work performed through 2001. It does not include approximately \$38 million in new claims submitted by May 1, 2003, for work performed through 2002, which have not yet been reviewed and approved by DOE.

Question. How much of the claims have been audited?

Answer. The review and audit of all of claims submitted and received by May 1, 2002, is complete. The review and audit of all claims submitted by May 1, 2003, will be completed within 1 year of the submission date, consistent with DOE's regulations (10 CFR Part 765) implementing EPACT Title X.

Question. Based upon currently available funds, as well as funds requested in the fiscal year 2004 budget, when will these claims be fully paid? Based upon its projection of when current claims will be fully paid, how much time will have elapsed from the time that the claims were filed until the claims are fully paid?

Answer. As stated in the previous answer, there is an outstanding balance of \$78.5 million in approved claims. Based upon the fiscal year 2004 budget request of \$51 million, this outstanding balance would not be fully paid until fiscal year 2005. The elapsed time from submission of these claims until payment in full of all the claims would be about 3 years.

Question. What is DOE's projection of the amounts of new claims it expects to receive in fiscal year 2003? In fiscal year 2004? In fiscal year 2005? In fiscal year 2006?

Answer. The following estimates are based on information provided by the licensees who are eligible for reimbursement under the Title X program. The amounts are the Federal government's share that would be eligible for reimbursement assuming the claims are approved in full. Approximately \$20 million of the total claims submitted over this 4 year period would be for amounts that exceed the per dry short ton reimbursement limit for uranium licensees; i.e., they would not be eligible for immediate reimbursement in accordance with EPACT Title X, as amended. However, these amounts would be eligible for reimbursement after fiscal year 2008, if the Secretary makes a determination at that time that there is sufficient authority under EPACT Title X, as amended, to reimburse those amounts.

Fiscal year 2003.—\$38 million (\$7 million exceeds dry short ton reimbursement limit).

Fiscal year 2004.—\$36 million (\$6 million exceeds dry short ton reimbursement limit).

Fiscal year 2005.—\$35 million (\$6 million exceeds dry short ton reimbursement limit).

Fiscal year 2006.—\$33 million (\$1 million exceeds dry short ton reimbursement limit).

Question. What is DOE's current budget estimate for reimbursement of Title X claims in fiscal year 2004? Fiscal year 2005? Fiscal year 2006?

Answer. As you know, we have requested \$51 million for fiscal year 2004. For fiscal year 2005 and fiscal year 2006, the Department plans to request funding to meet our Title X obligations in a timely manner based on the estimates provided by the licensees who are eligible for reimbursement.

Question. Assuming (conservatively) that all claims are approved as submitted, what is the level of shortfalls in the DOE budget estimates to meet these claims? Under these projections, what would be the balance of unpaid claims at the end of fiscal year 2006?

Answer. As of May 7, 2003, the total outstanding balance of approved claims that are eligible for reimbursement pending future appropriation of funds is \$78.5 million. Approximately \$38 million in new claims were submitted by May 1, 2003. Assuming that all claims are approved as submitted, the balance of unpaid claims at the end of fiscal year 2004 would be \$61 million—a reduction of \$18 million relative to the fiscal year 2003 balance. The Department anticipates annual reductions to the unpaid balances at a similar level through fiscal year 2006.

Question. Based upon DOE's current projections, what would be the average length of time from the time that new claims are submitted until they are fully paid?

Answer. Based on DOE's current assessment, it would take an average of about 2 years before submitted claims are fully paid.

Question. What is DOE's rationale for the long delays in making payments after approved and audited claim have been made?

Answer. After the claims have been audited and approved, the timing of the actual reimbursements is subject to the availability of appropriations for this purpose. Consistent with Title X of the Energy Policy Act of 1992, we have made annual payments to the licensees. In accordance with the Department's Title X regulations (10 CFR Part 765), and subject to the availability of appropriations for this purpose, we have made reimbursements within 1 year of claim submission. When circumstances have allowed, we have made more than one payment in some years and have accelerated payment of outstanding claims when possible. For example, when Congress provided supplemental appropriations for Title X several years ago, outstanding claims were promptly paid consistent with those appropriations. Last August, when Congress increased the reimbursement authority for the thorium licensee, all outstanding claims to the uranium licensees had been paid; and in September, we paid all remaining fiscal year 2002 Title X funds to the thorium licensee to reimburse a portion of its previously approved claims. Because the backlog of unpaid claims currently exceeds the requested fiscal year 2004 appropriation, we will consider making payments for the currently approved claims immediately following the receipt of the fiscal year 2004 appropriation, as we did on one other occasion when appropriations had not kept pace with approved claims.

The Federal Government has a legal obligation to pay its share of the costs of remediation of Title X sites, just as the government has a legal obligation to reimburse its contractors for the costs of remediating contamination at the government's own facilities.

Question. Why should the reimbursement of the government's share of the costs at Title X sites be subject to delays relative to the reimbursement of the government's own contractors?

Answer. DOE's relationship to the Title X licensees is not comparable to the relationship between DOE and its contractors. DOE's contractors conduct work only at DOE's direction. By contrast, the Department does not have contracts with the Title X licensees and therefore cannot control the rate of reimbursable costs being incurred at licensee's sites.

The reimbursement of the Federal Government's share of approved costs at Title X sites is subject only to annual appropriations for this specific purpose. The current and projected backlog of reimbursements is the result of the increased reimbursement authority for the thorium licensee, which increases the projected remaining liability of the Title X program from about \$80 million to about \$280 million. When the fiscal year 2003 budget request was submitted, the then-existing reimbursement authority for the thorium licensee had been exhausted. Carryover funds and the \$1 million fiscal year 2003 request were more than adequate to fully reimburse the uranium licensee claims submitted in 2002. The \$225 million increase in thorium authority was enacted on August 21, 2002, well after submission of the fiscal year

2003 budget request. Prior to this increase in authority, our planning projections indicated we would need less than \$15 million per year over the next 4 fiscal years to keep current with our payments.

Question. Would it be equitable of the Congress to consider applying the same standards for its own contractors, such as the Prompt Pay Act requirements; penalty and damage provisions in the Federal Acquisition Regulation and the Department of Energy Acquisition Regulation, to Title X reimbursements?

Answer. There is no contractual relationship between the licensees and the Department for the cleanup of their sites, and therefore it would be inappropriate to apply the standards and provisions that you refer to. The Department has a legal obligation to reimburse the Title X licensees for the Federal Government's share of their cleanup costs. However, the Department's ability to pay these costs is limited by the amounts appropriated annually for this purpose. In fact, within the limits of its appropriations, the Department has reimbursed licensees at least annually as required by law, and we have reimbursed licensees at least partially within 1 year or less after claim submittals, consistent with the availability of appropriations and our Title X regulations.

PRIVATELY FUNDED TECHNOLOGY FOR EM

Question. Ms. Roberson, I am aware that at least one company has put up its own money to develop an innovative waste treatment and separation technology that, if it works, could substantially reduce the costs of tank cleanup at Hanford and at other sites. I also noted that the President's fiscal year 2004 budget includes a commitment that DOE will share part of the savings from the deployment of innovative cleanup technology as an inducement to encourage contractors to take the financial risk to develop breakthrough technologies.

What is the Department doing to encourage such private sector solutions?

Answer. One of the major recommendations of the Top-to-Bottom Review was improving the Department's contracting process with private sector entities, which may yield the single best opportunity for enhancing the economy and efficiency of the Environmental Management cleanup operations. The Top-to-Bottom Review team construed the acquisition function in a broad manner to include how the EM program can provide incentives for or entice best-in-class contractors to submit proposals in response to solicitations and how EM can effectively access private sector companies that have not traditionally submitted proposals to conduct EM work.

In implementing this recommendation, EM has chartered a special contracting team to aggressively pursue new and improved contract models to accelerate cleanup of our sites. We are currently challenging our site contractors, through re-alignment and restructuring of their contracts, to both seek out and deploy the best technology solutions to our cleanup problems and to develop and proffer new business approaches to accelerate cleanup. Where it makes good technical and business sense, we will offer substantial incentives to a private sector company to solve a cleanup problem through deployment of a technology that has its roots entirely in a private sector investment.

Question. Would it be possible to put in place contracting mechanisms that would permit and reward deployment of such privately-financed cleanup technologies?

Answer. Consistent with laws and policies that ensure sound contracting and fiscal responsibility, the Department has wide latitude to implement contracts that would permit and reward deployment of privately financed cleanup technologies.

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

Question. In the fiscal year 2003 Omnibus Appropriations Conference Report, Congress once again directed DOE to continue to evaluate the Advanced Vitrification System (AVS) and proceed to demonstration by implementing the February 28, 2002 work plan. This direction makes clear that an integrated demonstration of that technology is needed to determine if the promise of lower costs and faster vitrification can be realized. What is the status of your efforts to evaluate and demonstrate the AVS technology?

Answer. As you may be aware, the DOE Office of Inspector General issued a report on the Advanced Vitrification System in August 2002, providing the following recommendations:

- delay funding decisions on AVS until major uncertainties have been addressed;
- develop specific, focused performance measures to more fully gauge progress in the evaluation and selection of an alternative or advanced vitrification technology; and

—address all technical, programmatic, and financial challenges and uncertainties identified in previous studies during the upcoming business plan evaluation.

I have agreed with these recommendations and developed an Action Plan, which describes an approach to evaluate and develop immobilization alternatives for treating high-level waste (HLW) at Hanford. We will evaluate the technical and financial merits of AVS and other alternatives recommended by a recent technical panel. Those alternatives include an advanced Cold Crucible Melter and an Advanced Joule Heated melter. As part of the evaluation, questions regarding technical details of the AVS were provided to the Radioactive Isolation Consortium (RIC). Representatives from the RIC provided the Department with responses to the questions and participated in a review which was held on February 24–28, 2003, in Richland, Washington. The two review teams (technical and financial) are currently drafting their reports and will submit them to a DOE technical working group (TWG).

The TWG has the responsibility of reviewing the reports and making a recommendation to me for future research and development of immobilization alternatives to treat HLW. A decision is currently planned for June 2003. The Department has extended the period of performance and associated funding to the Radioactive Isolation Consortium through the end of June 2003 to support this schedule.

Question. How soon can the work plan for AVS be implemented to demonstrate whether its potential may be realized and does your department have sufficient funding to begin implementation of this work plan?

Answer. The Department is currently evaluating whether or not the Advanced Vitrification System is plausible for use to treat high-level waste at Hanford. If a decision is made by the Department to pursue additional evaluation of the Radioactive Isolation Consortium's AVS, the draft work plan provided to the Department in February 2002 will be used to initiate development of the work scope and funding would be available. A decision is currently planned for June 2003.

QUESTIONS SUBMITTED BY SENATOR MITCH MCCONNELL

Question. As I have noted in the past, I strongly support efforts by the Department of Energy and the Kentucky Natural Resources and Environmental Protection Cabinet to develop and implement an accelerated cleanup plan for the Paducah Gaseous Diffusion Plant. Like you, I am disappointed that the Department and the State have not yet been able to reach such an agreement.

Can you provide me with a brief update on the status of your negotiations with the commonwealth of Kentucky to reach an agreement on a site performance management plan for the Paducah facility?

Answer. The Department recently reached an agreement with the regulators on new cleanup milestones for the next 3 years. This negotiated resolution, while not accelerating cleanup at the site, does clear the way for the development of an updated Paducah site management plan (SMP), which serves as the blueprint for cleanup activities for the next 3 years.

The three parties also agreed to conduct good faith negotiations to develop a complete scope of work for the Paducah cleanup by September 15, 2003. I cannot commit at this time as to if, or when, a Performance Management Plan, as that term is used in Section 315 of Division D, Title III of the Consolidated Appropriations Resolution, 2003, will be developed.

Question. What do you see as the major obstacles to reaching an agreement?

Answer. The most significant obstacle to reaching an agreement remains the difference of opinion as to the degree and nature of the required cleanup beyond those actions to which we are already committed. In addition, the Department and the Kentucky Natural Resources and Environmental Protection Cabinet are working to resolve several notices of violation at the facility, issued previously by the Commonwealth.

While I continue to hope for an accelerated cleanup agreement for the Paducah site soon, Section 315 of the Energy & Water title of the Omnibus clearly outlines the fiscal year 2003 funding for sites that have not implemented site performance management plans with the Department of Energy. Specifically, the language limits the funding for those sites to either “the comparable current year level of funding, or the amount of the fiscal year 2003 budget request, whichever is greater.”

Question. Can you tell me if the Department has determined which of those amounts—the fiscal year 2002 level of funding or DOE's fiscal year 2003 request—is the greater amount for the Paducah site?

Answer. The Department has determined that the greater amount is the fiscal year 2002 funding level as appropriated and adjusted, that is \$125,315,000.

Question. Does the Department intend to provide the greater of these two amounts for cleanup activities at Paducah, as specified by Section 315?

Answer. We have provided Paducah with \$110,884,000, which supports the limited number of acceleration activities to which the Department and the site regulators have agreed. Since we do not have an integrated, long-range acceleration plan for Paducah, as reflected in a performance management plan and agreed to with the regulators, and do not expect to have one this fiscal year (2003), we do not anticipate providing any additional funds for cleanup activities.

QUESTIONS SUBMITTED BY SENATOR ROBERT F. BENNETT

Question. What is the present status of the Moab Tailings Project EIS and what is the expected timeline for completion?

Answer. An Environmental Impact Statement is currently being developed to assess impacts from the following remediation scenarios: cap the tailings in place at their present location, relocate the tailings to the existing U.S. Nuclear Regulatory Commission-licensed White Mesa Mill facility near Blanding, Utah, or relocate the tailings to one of two sites, Klondike Flats or Crescent Junction, to be developed on Bureau of Land Management land north of Moab.

Public scoping meetings were conducted during January 2003 in the communities potentially affected by the remediation scenarios being considered. The Draft EIS is scheduled for public release in January 2004. Following a 45-day public comment period on the Draft, the Final EIS is scheduled to be available to the public in August 2004.

Question. What remediation work, if any, can be completed with the level of funding provided under the Administration's request?

Answer. At the requested funding level of \$2 million, no remediation work will be performed. At the request level, the environmental impact statement will be completed on schedule and interim groundwater actions, tailings pile dewatering, and erosion and dust control will be continued at their current level.

Question. If additional funds beyond the Administration's request are appropriated, what remediation efforts might be undertaken and what would be the most immediate priorities?

Answer. The requested funding level of \$2 million includes all activities planned for the Moab site in fiscal year 2004. The planned activities are development of the draft Environmental Impact Statement, which will incorporate recommendations of the National Academy of Science Report on Moab to be completed in January 2004, and the final EIS is expected to be issued in August 2004. In addition, funding for interim groundwater action, pile dewatering, and erosion and dust control is provided.

Question. What is the status of any present efforts at site remediation, including the operation and maintenance of the interim ground water pump and treatment system?

Answer. DOE will install the Interim Ground Water Corrective Action by September 30, 2003. This action is a series of groundwater extraction wells and a lined evaporation pond constructed on top of the tailings pile. The extraction wells will allow for removal of groundwater with the highest concentrations of ammonia. In addition, DOE has completed the removal of contaminated soils from the U.S. Highway 191 right-of-way adjacent to the DOE site. This removal allows the Utah Department of Transportation workers to work in a clean area during the Highway 191 widening project, which is planned for Summer 2003.

DOE will continue ongoing maintenance at the site, including operating the tailings pile dewatering system, applying dust control surfactant, and filling erosion rills that form on the pile.

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

Question. Ms. Roberson, I am very concerned about the delay in awarding the River Corridor Closure contract, and the rumored reasons for this delay. Delay will only hurt the efforts to accelerate cleanup at the site. I have heard the reason for the delay may involve the Administration's intention to remove the current requirement that the successful contractor commit to become a signatory to the Site Stabilization Agreement. If these disturbing reports are true, the negative consequences to the Hanford Site and to the Tri-Cities community would be substantial—including labor unrest that such a policy reversal will cause across the site and not just affecting this important closure contract.

I would like to know if this contract award is being delayed, and if the Administration does intend to remove the Site Stabilization Agreement requirement contained in the request for proposals and contract terms?

Answer. The River Corridor Contract was awarded on April 25, 2003. Shortly before that, on April 22, Secretary Abraham granted an exemption from the requirements of Executive Order 13202 for construction work covered by this procurement, determining that the River Corridor project satisfies the requirements of section 5(c) of the Order. This provision provides that an exemption may be granted for a project where an agency has issued "bid specifications" containing a requirement to abide by a project labor agreement and one or more construction contracts subject to such a requirement have been awarded as of the date of the Order.

Question. Ms. Roberson, for fiscal year 2003, the final conference agreement imposed general reductions which will require decreases in your cleanup budget.

Can I have your assurance that these general reductions will be allocated in a manner to minimize disruption to priority projects, such as the tank cleanup effort at Hanford, and will not be applied disproportionately to any particular program?

Answer. The final fiscal year 2003 Environmental Management Consolidated Appropriation, Public Law 108-7, imposed general reductions totaling \$118,058,000. These reductions were applied against the Defense Environmental Restoration and Waste Management, Non-Defense Environmental Management, and Uranium Facilities Maintenance and Remediation appropriations. Prior year balances totaling \$5,546,276 were available to partially offset these general reductions. The remaining \$112,511,724 was applied proportionately against each program, project or activity as directed by specific language contained in the fiscal year 2003 Consolidated Appropriation Conference Report, H.R. 108-10. The exception to this approach was the \$25,000,000 general reduction applied to the Uranium Facilities Maintenance and Remediation appropriation. Within this appropriation, \$340,329,000 was specified in law for the Uranium Enrichment Decontamination and Decommissioning Fund account. Accordingly, the \$25,000,000 reduction was applied only to the Other Uranium Activities account within the Uranium Facilities Maintenance and Remediation appropriation.

Question. Ms. Roberson, for almost four decades, the Hanford Environmental Health Foundation (HEHF), a community-based non-profit organization, has provided quality occupational health services to workers at the Hanford site. I understand HEHF has broad support from the community and organized labor at Hanford.

What is the status of efforts to ensure that workers at Hanford continue to receive excellent occupational health services?

Answer. DOE is committed to providing excellent occupational medical services to the Hanford workforce. The current contract with the Hanford Environmental Health Foundation expires at the end of fiscal year 2003, with no extensions available. In March, DOE issued a Request for Proposals for a new occupational medical services contract. Contractor proposals are due on May 23, 2003. We expect to make an award and transition to the new contract by the end of the current contract. The new contract will require the same high quality of occupational health services that currently exist at Hanford. These services include long-term health legacy activities, first aid, employee assistance, emergency preparedness support, fitness for duty, medical monitoring exams, and prevention/mitigation activities.

Question. Ms. Roberson, as you know, the HAMMER Training Center provides for Hanford workers with excellent training for their jobs. I have been told this has led to one of the best safety records across the country. I am disappointed that the EM budget again fails to fund HAMMER directly. I am further disappointed that there is no direct proposal by the Administration for how to transfer HAMMER to another part of DOE or another agency. I would like to work with you to protect worker training and the value of HAMMER.

To do so, I would like to know if DOE now has any plans for the transfer of HAMMER to another entity?

Answer. At the present time, DOE has no plans to transfer HAMMER.

Question. I would also like to know how EM plans to maintain the training of Hanford workers at HAMMER if the program is not the direct manager of the facility?

Answer. EM will continue to be a customer of HAMMER along with other DOE and non-DOE organizations. We foresee HAMMER as an available resource that the EM program may draw upon in support of the cleanup mission.

Question. Ms. Roberson, assuming funds are provided by Congress, do you support the activities of the Atomic Heritage Foundation's Manhattan Preservation Project which would preserve historically significant facilities such as Hanford's B-Reactor and T Plant so future generations could visit them?

Answer. I do not support using Environmental Management cleanup funds for this purpose. However, assuming funds are provided by Congress to maintain and operate historic properties, DOE supports the goals of preserving significant historic facilities, such as Hanford's B-Reactor for the enjoyment and education of current and future generations.

Question. Ms. Roberson, in 1994, the Hanford Joint Council was created. In its 9-year history, a 100 percent success rate of resolving over 40 highly contentious whistleblower cases. It is felt that this board saved millions of dollars in attorney fees that would have been paid out to fight these claims in court. More importantly, the Council resolved the underlying safety issue brought up by the whistleblower. I have learned that the Department of Energy dissolved this Council a few weeks ago. The question is: why? The Joint Council cost the DOE about \$400,000 per year. Could you please explain the logic behind doing away with the Hanford Joint Council?

Answer. The Hanford Joint Council was a subcontractor to Fluor Hanford Inc. (FHI). The Joint Council was established for an initial period of 5 years, beginning October 1994. In July 1997, the charter was revised and the scope of the Joint Council was established to investigate and seek full and fair resolution of significant concerns involving health, safety, quality and environmental protection issues using an alternative mediation approach. From 1994 to 1997, there was a significant backlog of safety, health and environmental concerns. The backlog was due to a lack of confidence and trust in the Hanford contractor's employee concerns programs. The Department saw a need to establish an independent party to assist in the resolution of the concerns/backlog. During this time, the Joint Council was established and played a major role in the resolution of employee concerns.

Today, FHI has implemented a number of safety programs (Voluntary Protection Program, President Zero Accident Council, Employee Zero Accident Council, Hanford Atomic Trades Council Safety Representatives) where contractor management and workers meet in an open forum to discuss safety issues at the Hanford Site. In addition to the safety programs, FHI has also enhanced their internal Alternative Dispute Resolution Program (ADR) for resolving employee concerns.

Due to the implementation of the safety programs and the ADR process identified above, FHI has seen a significant decrease in anonymous concerns each year and is confident that safety concerns can be raised without fear of reprisal. FHI has demonstrated that it has programs in place that are adequately resolving concerns and are continuing to improve the effectiveness of the Employee Concerns Program.

Question. Ms. Roberson, I have been told that some workers at the high-level nuclear waste tank farm area of Hanford have been complaining of becoming ill after exposure to toxic vapors that escape from the tanks.

I would like to understand how many workers have sought medical treatment evaluation in the last 18 months from these exposures and what the Department is doing to investigate the cause of the exposures?

Answer. There have been 29 requests for medical evaluation from workers who reported smelling vapors in the tank farms over the last 18 months. All workers who reported smelling odors in the tank farms were encouraged to seek medical attention and those who reported an actual symptom, such as headache or nausea, were required to seek medical attention. The medical evaluations determined that none of these cases required medical treatment. The Contractor's Industrial Health and Safety Program has implemented a number of appropriate and conservative features to protect workers from exposures to high concentrations of vapors, primarily consisting of ammonia and volatile organics.

First, a number of engineered controls are in place, consisting primarily of sealing the known vapor leak paths such as around the tank pit covers, valve covers and other structures. Second, administrative controls are employed that include real time monitoring for vapors and establishment of physical barriers to prevent workers from walking into areas that may contain high vapor concentrations. Finally, industrial hygiene technicians monitor the work areas in the tank farms to insure that workers in and around the tanks are not exposed to high vapor concentrations. This entails workplace monitoring using state-of-the-art hand-held (which can measure in parts per billion) and fixed monitoring equipment. Additionally, our contractor has established administrative operating limits for vapor exposures that are below national consensus standards and guidelines to provide additional protection and assurance. For example, the most conservative limit for ammonia exposure is 35 ppm for a 15-minute exposure; our contractor has established that limit at 25 ppm for any exposure duration. The Occupational Safety and Health Administration (OSHA) sets that limit at 50 ppm for an 8-hour exposure.

Additionally, external evaluations have been conducted to review practices and make recommendations for improvements as appropriate. The contractor has formed

a team of employees, led by a bargaining unit safety representative, to evaluate concerns and provide an improved mechanism for communication with the workforce. We also have expanded and upgraded our communication with the workforce on hazards in the workplace and the appropriate controls when working in areas where vapors may potentially exist. In addition, the required annual Hazardous Waste Operations and Emergency Response training was upgraded to focus on tank vapor hazards. Workers are regularly encouraged to raise issues and concerns in a variety of different venues.

Workers also may request additional protective equipment in accordance with OSHA regulations. The worker will be provided the appropriate protective equipment based on an integrated analysis of all the hazards associated with the work. The Department is actively engaged with the contractor to continue to address these concerns and assure a safe workplace and a well-informed workforce.

Finally, the Hanford Environmental Health Foundation conducted a 7-month study of the medical records of over 800 Hanford Tank Farm workers and has found nothing that would indicate that these workers have suffered any adverse health effects from exposure to tank farm vapors.

Question. Ms. Roberson, Washington State's Department of Ecology and the U.S. EPA recently sent a letter to the DOE calling for Hanford to end its practice of using unlined burial pits to dispose of radioactive materials.

What is the Department's response to the notion that Hanford ought to be utilizing state-of-the-art burial techniques that include pit liners, leachate collection and groundwater monitoring in connection with these burial grounds?

Answer. The current disposal practice of using unlined facilities complies with applicable laws and regulations and is the accepted practice both within DOE and commercially (Barnwell in South Carolina and U.S. Ecology in Washington). DOE is evaluating a more robust burial system to increase the margin of safety for the facility in terms of human health and the environment. This style of disposal system, analogous to a Resource Conservation and Recovery Act of 1976 disposal system, is evaluated in the revised draft Hanford Solid Waste Environmental Impact Statement that is currently issued for public comment.

Question. Ms. Roberson, if DOE decides to proceed with lined burial pits, how much longer will unlined burial pits be used?

Answer. For certain waste streams, such as the Submarine and Cruiser Reactor Compartments, as well as some other higher activity waste, there is no health or safety reason to change the current disposal practices of using unlined burial trenches.

However, for other low-level and mixed low-level wastes, we are evaluating the use of other disposal methodologies, including lined trenches, in the revised draft Hanford Site Solid Waste Environmental Impact Statement. We anticipate the new disposal method, as selected in the subsequent Record of Decision, could be available by fiscal year 2007.

Question. Ms. Roberson, last year, the U.S. EPA released a report on the Columbia River Fish Toxics Inventory, detailing the health risk to people who consume fish from the Columbia River, based upon tissue analysis of the fish. According to the report, some groups such as Native American tribes, have a 1 in 50 chance of contracting a fatal cancer from lifetime consumption of this fish.

Has DOE conducted, or is DOE planning to conduct, any studies to analyze the source of this contamination and how its release can be stopped?

Answer. The Department has reviewed the above referenced report as have other interested parties. These are not Hanford-derived contaminants. They are primarily derived from agricultural, mining and industrial sources throughout the Columbia River system. There was some initial confusion when the report came out regarding the source of the contaminants in the fish that were studied. Because the report discussed (among other things) fish that were caught in the Hanford Reach, some readers assumed the contaminants were from the Hanford Site. A careful reading of the report, however, indicates otherwise. The contaminants identified in the fish are heavy metals, pesticides, polychlorinated biphenyls (PCBs), etc. The only connection with the Hanford Site is that some of the fish were caught in the vicinity of the Hanford Reach. The Columbia River in the Hanford Reach is a Class A river and any Hanford-related contaminants (as measured just downstream of the Hanford Site) are several orders of magnitude below the ambient water quality standards. That being said, the Hanford Site is actively working to remediate and minimize any potential impact from the migration of contaminated groundwater into the Columbia River at the localized plume areas along the Hanford Reach.

Question. Ms. Roberson, last October, the Department publicly announced that it would close 40 of the high-level nuclear waste tanks at the Hanford site by 2006. However, there is no agreement with regulators about the definition of a "closed"

tank nor has there been any public discussion of this issue. This has led to serious concern among regulators and the public that the Department is moving forward without the proper notice and approval.

How do you intend to get the Department and its regulators and the public in agreement on this issue?

Answer. The Department is striving to accelerate risk reduction by closing tanks in compliance with regulatory requirements. The Tri-Party Agreement (TPA) provides a framework for developing the tank closure process with the State of Washington's Department of Ecology (Ecology) and the U.S. Environmental Protection Agency. The Office of River Protection (ORP) is currently drafting a proposed change to the TPA which addresses requirements for retrieval and closure of Hanford Site single-shell tanks, establishes single-shell tank retrieval and closure demonstrations, and associated regulatory process documentation requirements. The single-shell tank system closure activities are dependent upon successful modification of regulatory documents through the addition of the Single-Shell Tank System Closure Plan. This plan would go through the required regulatory process which includes public review and comment.

Question. Ms. Roberson, last year, the U.S. EPA released a report on the Columbia River Fish Toxics Inventory, detailing the health risk to people who consume fish from the Columbia River, based upon tissue analysis of the fish. According to the report, some groups such as Native American tribes, have a 1 in 50 chance of contracting a fatal cancer from lifetime consumption of this fish.

Ms. Roberson, can you tell me how many claims have been filed under Subtitle D of the Energy Employees Occupational Illness Compensation Program Act of 2000 at Hanford?

Answer. As of June 4, 2003, the Department of Energy's Office of Worker Advocacy had received 1,637 Hanford applications for assistance under Subtitle D of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). Of these, 722 cases have been reviewed.

Question. Further, can you tell me how many of these claims at Hanford have been decided under the DOE Physicians' Panel?

Answer. As of June 4, 2003, 28 Hanford cases have been sent to the Physician Panels, of which seven decisions have been issued.

Question. How many have been paid?

Answer. It is too early in the process for any EEOICPA Subtitle D claims to have been paid. This will be done only when claimants have completed the State workers' compensation claims process, a process that is outside of DOE's control. It is important to point out that DOE does not pay claims; however, under the provisions of Executive Order 13179, DOE is required to report to Congress on the number of claims paid, and we are setting up procedures in order to carry out that responsibility.

Question. Ms. Roberson, earlier this year, the Department published a proposed Environmental Impact Statement for Hanford that was focused on a variety of new technologies for treating low-activity waste. This was followed by a series of public meetings where DOE committed that: a) additional views would be carefully considered; and b) there would be plenty of opportunity for change to the proposed EIS. I'm concerned that, in contradiction to those commitments, the interests of my State are being ignored by the DOE. Proper and timely treatment of low-activity waste is important. But there may be even more important opportunities to reduce waste volumes, costs, and schedules in the high-level waste stream that are not even being considered by the DOE. Governor Gary Locke wrote to express these concerns and my understanding is that, not only hasn't he received a substantial response, but also there have been informal indications that his concerns will be ignored by DOE in the next round of the EIS process. The residents of my State recognize that minimizing the cost of effective Hanford waste clean-up is critical to ensuring that there is enough funding to do the job right. It's impossible to make good judgments about potential technologies that should be included in the EIS without a thorough evaluation of the "life-cycle" costs (including temporary waste storage, transportation, and long-term disposal) for various high-level and low-activity waste technologies. This point was also addressed in the Governor's response to the initial EIS draft. I too would like to know specifically how DOE plans to address the prospect for high-level waste technologies and the life-cycle costs of various technologies before our Subcommittee considers the fiscal year 2004 appropriations request. I'd be grateful for your response at the earliest possible date.

Answer. The Department remains committed to vitrifying all of the high-level waste present in the Hanford tank system. We anticipate that only about 10 percent of the total volume of tank waste will ultimately be classified as high-level. We have modified the Waste Treatment Plant contract to add an additional high-level waste

melter to assure successful and timely processing of this material containing over 90 percent of the radioactive hazard. This portion of the waste will be disposed of in a geologic repository.

Approximately 90 percent of the volume of waste in the tanks is low-activity waste. Two low-activity waste melters in the Waste Treatment Plant will allow us to vitrify a great deal of this waste. In order to further optimize completion of tank waste treatment and control the life-cycle cost of the project, the Department is evaluating technologies that could be used to immobilize that portion of the low-activity waste not ideally suited for vitrification in the Waste Treatment Plant. At this time, the Department is making a nominal investment in these technologies; approximately \$6 million will be invested in fiscal year 2004. The Office of River Protection (ORP) is planning to complete technology selection by December 2003, and, if appropriate, begin system design in late fiscal year 2004. Life-cycle costs, including temporary waste storage, transportation, and long-term disposal, will be considered during the technology selection process in late 2003. The Washington State Department of Ecology was involved in the identification of the candidate technologies and all comments received were considered in scoping the Environmental Impact Statement (EIS). Preliminary life-cycle cost estimates are complete and more refined estimates will be made as test and design data become available. With regard to the proposed EIS for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, the Department is evaluating several conservative cases that will bound the environmental impacts that may result from implementation of the supplemental treatment technologies. ORP has completed public comment on the proposed scope of the EIS, and a Draft EIS will be available for public comment in September 2003.

Question. Ms. Roberson, in 2001 DOE's Office of Inspector General released a report regarding DOE's land holdings within the boundaries of the Hanford Reach National Monument in Washington State. The report recommended the transfer of these lands to the U.S. Fish and Wildlife Service as early as 2004. Such a transfer could challenge DOE's fiscal responsibilities as set forth in an agreement between the agency and the local governments in 1996.

I would like to know if this transfer is under consideration? If so, what is the status of the transfer, has DOE established a framework for implementation (including land surveys, agreements with the Department of the Interior, certification of waste removal, transfer liabilities, etc.), and how does DOE intend to fulfill the outstanding payment obligations as set forth in the 1996 agreement?

Answer. In response to the DOE Office of Inspector General report, DOE committed to pursue a phased transfer of approximately 265 square miles of the Hanford Site that is included in the Hanford Reach National Monument. The two phases correspond to completing certain environmental cleanup activities at Hanford that would significantly reduce the risk to the areas proposed for transfer. We have been working with the various elements of the U.S. Department of the Interior to define the specific legal processes to be used and the various specific activities that would have to be completed such as land surveys, etc., to complete the potential transfer. This work has not been finalized. The target date for the first part to be potentially transferred to the U.S. Fish and Wildlife Service, the Fitzner/Eberhardt Arid Lands Ecology Reserve, is approximately September 2004. The target date for the second phase, involving the "Riverlands," McGee Ranch and North/Wahluke Slope, is September 2005.

DOE policies allow for discretionary payments in lieu of taxes (PILT). The 1996 agreement to which you referred states that if there is "a change in the amount of property in Benton County under the Department's control, Benton County shall identify and explain those changes in its certification and, upon approval from the Department which will be forthcoming within 60 days of receipt of certification, payment will be made based upon that certification. The related PILT intergovernmental agreements between DOE and Grant County, and between DOE and Franklin County, specifically recognize that DOE's PILT "Payment and any future assistance payments under section 168 of the [Atomic Energy] Act are not entitlements."

DOE's discretionary authority under section 168 is limited to "those States and localities in which the activities of the Commission are carried on, and in which the Commission has acquired property previously subject to State and local taxation..." Within the limits of that statutory authority, DOE intends to fulfill its obligations under the agreements referenced above.

QUESTIONS SUBMITTED TO THE OFFICE OF CIVILIAN RADIOACTIVE WASTE
MANAGEMENT

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

YUCCA MOUNTAIN FUNDING LEVEL

Question. Dr. Chu, You noted in your testimony that the fiscal year 2003 funding level is a \$131 million reduction from the President's request. I've previously heard the Secretary note that this funding shortfall introduces a "high risk" with regard to DOE's ability to meet the goal of a December 2004 license application date. What additional funding will be required in this fiscal year to keep all critical elements of the program on schedule for the 2010 target opening date?

Answer. The targeted 2010 opening date is premised on submitting a license application by the end of 2004, receiving construction authorization by the end of 2007, and receiving a license to receive and possess waste in 2010. At a minimum, the under-funding in fiscal year 2003 will make it more difficult to meet our goal of submitting a license application by the end of 2004, and will require deferral of work activities that are essential to beginning receipt in 2010. The reduced appropriations have resulted in a replan of the Program through submittal of the License Application (LA). The key impacts of this replan are: LA submittal in December, 2004, but at a higher technical risk; partial shut down of Yucca Mountain site and deferral of certain scientific tests; and, further deferral of transportation work supporting a 2010 waste receipt goal. Also, some workforce reduction associated with the reduced appropriations is unavoidable.

Question. Will the Department be submitting a supplementary budget request for these resources?

Answer. The Department is still evaluating its options for addressing the fiscal year 2003 funding shortfall. The Program's fiscal year 2003 appropriation was certainly below what we felt was a realistic level to stay on schedule for submitting a license application by the end of 2004. The shortfall has called into question our ability to accomplish all the pre-license application work in the time frame we have set. The Department has no plans at this time to submit a supplemental budget request for fiscal year 2003, but is considering options including a fiscal year 2004 budget amendment request.

TRANSPORTATION

Question. Dr. Chu, I understand that adequate funding is not only required for the license application, but also for other critical long-lead elements of your program. Judging from our experience with WIPP (Waste Isolation Pilot Plant), the transportation program will be difficult to construct and will require years to put into place. How much of your fiscal year 2003 budget is devoted to transportation?

Answer. In an effort to maintain the December 2004 license application date, we have had to focus most of our resources in that area. As a result, a total of \$5 million is allocated to transportation, \$25 million less than requested in the Administration's request.

Question. Do you believe that the program is starting soon enough on transportation issues to have the system ready for operation by your target date of 2010?

Answer. Development of the transportation system requires an aggressive schedule to support the planned opening of the repository in 2010. Shortfalls in funding are impacting that schedule and we are currently analyzing the longer term effects of the reduced funding on the schedule.

MODES OF TRANSPORTATION

Question. Dr. Chu, from past debates on Yucca Mountain, it's clear that transportation issues will remain a major controversy. The mode of transportation will be one of the most controversial elements. I believe that DOE has stated that it favors a "mostly rail" program. Do you still favor primarily rail shipments?

Answer. The Yucca Mountain Environmental Impact Statement (EIS) stated that the preferred mode of transportation is mostly rail; however, the Department has not made a final decision on mode (i.e. mostly rail or mostly truck).

Question. When do you expect to issue a record of decision on preferred modes of transportation?

Answer. The exact timing and content of any Record of Decision is under evaluation within the Department in conjunction with other aspects of transportation planning. The Department intends to issue a Transportation Strategic Plan later this year that will outline the timeframes for decisions needed to assure that transpor-

tation capability will be available to support the planned initiation of repository operations in 2010.

Question. What are the critical elements in the path toward finalizing your waste acceptance and transportation systems?

Answer. The critical transportation elements are development of the Nevada transportation infrastructure, initiating acquisition of transportation casks and supporting equipment, and maintaining the institutional program.

Question. And what cost and risk can you estimate for each element?

Answer. The largest risk involved with the development of the transportation system is in the area of the development of the Nevada component of the system. The development of equipment to ship wastes has little risk since many components are available in the commercial sector.

The FEIS, released with the Yucca Mountain site recommendation, identified rail transportation as the preferred transportation mode. If the decision is made to ship by rail the development of a rail line would cost between \$300 million and \$1 billion depending upon which corridor is selected. The acquisition of transportation casks and supporting equipment will cost about \$500 million.

Question. If a rail shipment isn't in place by 2010, how many truck shipments will be required to replace the rail option?

Answer. Approximately 250 truck shipments would be required to ship 400 MTU in the first year of operation. The number of shipments would increase linearly as the waste acceptance rate increased.

Question. If the Department starts with a truck shipment program and transitions to a rail program later, won't this lead to some unnecessary costs in the program?

Answer. First, it is important to note that even under a rail shipment program, some shipment by truck is needed. Our goal is to minimize unnecessary costs, while at the same time maintaining the flexibility necessary for an optimum transportation campaign. The costs associated with a transition from truck to rail would depend on the length of time between the start of a truck shipment program and the start of a rail shipment program. If the time span were short, additional costs, if any, would be small. The longer the time span the more truck casks, beyond the number needed once rail shipment started, would have to be procured to meet the same acceptance rate. Such additional equipment investments would have little use once rail becomes operational.

SHIPMENT CASKS

Question. Dr. Chu, as you know some sites are placing waste today in NRC-licensed dual-purpose storage and transportation casks. I understand that sites are eager to have final guidance on the types of canisters and casks that will be acceptable at Yucca Mountain. Otherwise, sites may be doing work that simply must be repeated later. Will the initial operations of the repository accept NRC-licensed dual-purpose storage and transportation casks?

Answer. The Department's position is that multi-assembly canistered spent fuel is not covered by the disposal contracts between the Department and the utilities, and thus is not considered an acceptable waste form, and absent a modification to these contracts, will not be accepted for delivery to the Yucca Mountain repository. The Department has stated its willingness to initiate the appropriate actions to include such systems under the terms of the disposal contracts, as part of an overall contract modification that would address other waste acceptance and scheduling issues.

Question. Has the Department finalized acceptance criteria sufficiently to give adequate guidance to utilities, including the sites involved in decommissioning, which must move spent fuel to dry-storage right now?

Answer. The current acceptance criteria were established and agreed upon by the Department and utilities in the standard contract. The Department is aware that subsequent to signing the standard contract, issues have emerged that may require modifications to the acceptance criteria and thus to the contracts. One such issue is the acceptance of canister systems some utilities are now using to move spent fuel to dry storage. Unfortunately, as a number of these issues are the subject of ongoing litigation in the U.S. Court of Federal Claims, the Department is limited in its ability to pursue discussion of finalized or updated waste acceptance criteria with utilities at this time.

QUESTIONS SUBMITTED BY SENATOR HARRY REID

YUCCA MOUNTAIN

Question. I note that the GAO evaluated DOE's progress towards license application in December 2001 and estimated that it would take until early 2006 to resolve all outstanding Key Technical Issues (KTIs) to NRC's satisfaction. Since then only 70 of the 293 outstanding KTIs have been resolved, quality assurance is being questioned by NRC and GAO, and the Licensing Support Network is due to be submitted to NRC 6 months ahead of the LA. Can you really suggest that the only obstacle to your progress and to your ability to meet the license application deadline of December 2004 is the failure of Congress to provide sufficient funding for your program?

Answer. There are nine Key Technical Issues associated with repository development and operations at Yucca Mountain. Associated with the nine KTIs are 293 agreements. At the time of the Yucca Mountain site designation, NRC designated all 293 agreements as closed pending DOE's provision of additional information to NRC. Since that time, DOE has provided a portion of that information, and NRC has agreed that 78 of the 293 agreements are complete as of May 23, 2003. Despite significant budget shortfalls, DOE continues to develop the documentation and analyses to complete the remaining agreements. All agreements need to be addressed by defining a clear path to completion before License Application, but they do not necessarily need to be complete before LA.

DOE has identified some quality assurance issues that must be successfully addressed. NRC and the GAO assessment that you referenced have recognized these issues. While sufficient funding is not the only obstacle to our program, it is the most critical obstacle to our ability to meet our program goals. Sufficient funding is required for detailed repository design, Licensing Support Network development, and other key elements of an acceptable LA.

TRANSPORTATION PLANNING PROCESS

Question. Given the amount of available funding in fiscal year 2003, is it your intention to defer the transportation planning process in order to complete the LA by December 2004? What transportation related activities do you plan to complete in fiscal year 2003?

Answer. Because of the reduced funding level it is necessary to defer most of the national transportation activities in an effort to hold to the December 2004 LA date. The Department does plan to issue its Transportation Strategic Plan later this year.

Question. When do you expect to release a Transportation Strategic Plan and to what extent will you involve stakeholders in the development of that Plan?

Answer. The Department intends to issue a Transportation Strategic Plan later this year. The Department expects to involve stakeholders in the process to develop the Plan. Their comments will be considered as the more detailed transportation planning documents are developed.

Question. What plans do you have for involving stakeholders in the decision process for selection of a transportation mode, a rail corridor, a final repository design, and for other decisions yet to be made in regard to repository development?

Answer. The Yucca Mountain Final Environmental Impact Statement stated: "If, for example, mostly rail was selected, both nationally and in Nevada, DOE would then identify a preference for one of the rail corridors, in consultation with affected stakeholders, particularly, the state of Nevada." The Department is taking a careful and deliberative look at the potential resource impacts and other implications in making both the transportation mode decision and Nevada corridor decision. Decisions regarding transportation will be made after thorough consultations with stakeholders, including State and tribal representatives, as well as national and regional organizations that interact with the repository program. Further details will be developed as we proceed with transportation planning. We will continue to work with the stakeholders, including the State of Nevada and affected units of local government throughout the various phases of the repository's development and operation.

STAKEHOLDER INVOLVEMENT

Question. What is your vision for continued involvement of affected units of State and local government in the Yucca Mountain program during the license and application phase and subsequent phases of repository development?

Answer. I believe the Nuclear Waste Policy Act contemplated a cooperative, "government-to-government" relationship between the Department and the State and each of the affected units of local governments throughout all phases of the repository development. I believe that each governmental unit must have well defined

roles and a clear understanding of their responsibilities under the NWPA. Equally important, we should clearly understand each others' responsibilities and constituency. We need not agree on every issue but we should understand and appreciate each others' positions.

Question. Does the zero budget request mean that you will not be working with any of the counties, and that you no longer support their commenting on documents, their participation at meetings, their assessment of impacts, their preparation of data for the Licensing Support Network, or their provision of information to their citizens? If you are proposing to support some county programs and not others, what criteria will you use for determining their participation?

Answer. The Department's practice has been to provide the State and affected units of local government with oversight funding as appropriated by Congress, and the Department does not expect to deviate from this practice. As the Department transitions from a site characterization phase to a licensing phase, it is important for the Department, State, and affected units of local government to identify the types of activities for which oversight funding can be requested and provided. We are developing guidelines for activities that could be funded in the licensing phase. These guidelines will be discussed at the next Affected Units of Government meeting scheduled for June.

LEGACY MANAGEMENT AT YUCCA MOUNTAIN

Question. What is your vision for legacy management in relation to the Yucca Mountain project?

Answer. There are varying views of what "legacy" management can mean. However, let me share with you the view I expressed during my confirmation hearing. I believe the existence and continuing accumulation of nuclear waste, spent fuel, and excess defense nuclear materials in the United States and globally demonstrates that the long-term management and disposal is not a matter of choice but a necessity. Prudent management of these materials is a profound and enduring responsibility of the Federal Government, the international community, and the world at large. I believe geologic repositories are vital to closing the nuclear fuel cycle and removing an impediment to the future development of nuclear power in this country. At the same time, repositories provide the means for us to manage excess defense nuclear materials and promote global non-proliferation.

After many years of study, the scientific consensus is that the best long-term solution for this legacy is safe disposal in a deep geologic repository. Above all, the most important goal for this program is the long-term safety of the repository. That is the most important test we have to pass. It is the program's vision to have an environmentally safe and secure repository that sets the standard for safety throughout the world.

I hope the legacy of a safe repository at Yucca Mountain will be recognition that this facility served a vital role in both energy and national security for our Nation.

SUBCOMMITTEE RECESS

Senator DOMENICI. We stand in recess.

[Whereupon, at 3:50 p.m., Monday, April 7, the subcommittee was recessed, to reconvene subject to the call of the Chair.]