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UPDATE ON THE CURRENT STATE OF NUCLEAR WASTE MANAGEMENT POLICY

HEARING

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

MAY 15, 2015

Serial No. 114–42

Printed for the use of the Committee on Energy and Commerce
energycommerce.house.gov

U.S. GOVERNMENT PUBLISHING OFFICE
96–988 WASHINGTON : 2016

For sale by the Superintendent of Documents, U.S. Government Publishing Office
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UPDATE ON THE CURRENT STATE OF NUCLEAR WASTE MANAGEMENT POLICY

FRIDAY, MAY 15, 2015

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY,
COMMITTEE ON ENERGY AND COMMERCE
Washington, DC.

The subcommittee met, pursuant to call, at 9:00 a.m., in room 2123, Rayburn House Office Building, Hon. John Shimkus, (chairman of the subcommittee) presiding.

Present: Representatives Shimkus, Harper, Whitfield, Pitts, Murphy, Latta, Johnson, Hudson, Cramer, Tonko, Green, McNerney, and Pallone (ex officio).

Also Present: Representative Newhouse.

Staff Present: Charlotte Baker, Deputy Communications Director; Will Batson, Legislative Clerk; Leighton Brown, Press Assistant; David McCarthy, Chief Counsel, Environment/Economy; Chris Sarley, Policy Coordinator, Environment & Economy; Peter Spencer, Professional Staff Member, Oversight; Andy Zack, Professional Staff Member; Christine Brennan, Minority Press Secretary; Caitlin Haberman, Minority Professional Staff Member; and Rick Kessler, Minority Senior Advisor and Staff Director, Energy and Environment.

OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. SHIMKUS. It is 9:00. We want to start promptly. There is going to be votes sometime early this morning, and we want to get the opening statements through and encourage members to get back afterwards to follow up with questions. I will recognize myself for 5 minutes for an opening statement.

Thank you all for coming to this morning's hearing to receive an update on the status of and outlook for progress on America's nuclear waste management policy. Let me state at the outset that issue of the Nation's nuclear waste management policy is not a partisan issue. The House of Representatives has repeatedly supported Yucca Mountain in an overwhelming and bipartisan manner. Last summer, efforts to abandoned Yucca Mountain were defeated on the House floor with the body voting 4 to 1 in favor of Yucca Mountain. This includes nearly two-thirds of the Chamber's Democrats.

In April, I once again led a bipartisan group of members to see Yucca Mountain site firsthand. The site is an invaluable national asset isolated in the Nevada desert, removed from all population centers, and co-located with the Nevada National Security Site.

Since my previous visit in 2011, the landscape has notably advanced to support the development of a permanent repository. In 2013, the D.C. Court of Appeals ruled that Nuclear Regulatory Commission must continue its review of the Yucca Mountain license application. The court issued a writ of mandamus, a very consequential legal action, and declared it was illegal for the NRC to stop consideration of the license. As a result of this decision, the NRC resumed the scientific and technical evaluation of the license known as the Safety and Evaluation Report, or SER. The SER looked at a plethora of potential natural and manmade scenarios which could affect the performance of the facility. In January of this year, the NRC released the fifth and final volume of the SER. The NRC staff determined the facility could meet all safety regulations including that it could safely serve as a repository for up to a million years. Meanwhile, the costs of inaction and delay continue to mount. The courts ruled the Department of Energy's dismantling of the Yucca Mountain project no longer constitute a permanent disposal program. Therefore, the Federal Government could no longer collect the nuclear waste fee, a surcharge paid by consumers of nuclear-generated electricity.

While the fee is no longer being actively collected, the Treasury Department still maintains a balance of nearly $33 billion in ratepayer money to license, construct, and operate Yucca Mountain. But it isn't just ratepayers who are paying for the consequences of the delay. All American taxpayers, regardless of whether they benefit from commercial nuclear power, are footing the legal bill, and the bill isn't cheap. Last year, the Department of Justice account that pays damages on behalf of the Federal Government, known as the Judgment Fund, paid out over $900 million in settlements as a consequence of our inability to move forward with Yucca. This accounted for nearly a third of all Federal Government legal fees.

We in the Federal Government have an obligation to uphold the law, to dispose of commercial spent nuclear fuel, as well as honor the commitment made to states who host sites to support our nuclear defense activities, including South Carolina, Idaho, and Washington State. Congress needs a willing partner to host a nuclear disposal facility as we currently have with the sites that contributed to the Manhattan Project. I am committed to working with the State and local stakeholders in Nevada, who will engage in a constructive conversation to resolve the current impasse.

Just saying no is not an option. As part of this process, we will look for areas of agreement such as facilitating a benefits package for communities to provide long-term budget stability, strengthen the State's education fund, and identify associated transportation infrastructure benefits. As a host state of a Nevada National Security Site, however, Nevada already is a constructive partner with the Federal Government to protect our National interests. This, by the way, includes storing radioactive waste onsite today.

I look forward to hearing from a broad group of stakeholders today who will highlight the need to finish a repository, as the House Representative supports, as the courts direct, and as the American people deserve.

Thank you, and I now recognize the ranking member, Mr. Tonko, for his opening statement.

[The prepared statement of Mr. Shimkus follows:]

PREPARED STATEMENT OF HON. JOHN SHIMKUS

Thank you all for coming to this morning's hearing to receive an update on the status of, and outlook for progress on, America's nuclear waste management policy.

Let me state at the outset that the issue of the nation's nuclear waste management policy is not a partisan issue. The House of Representatives has repeatedly supported Yucca Mountain in an overwhelming and bipartisan manner. Last summer, efforts to abandon Yucca Mountain were defeated on the House floor with the body voting four to one in favor of Yucca Mountain. This includes nearly ⅔ of the Chamber's Democrats.

In April, I once again led a bipartisan group of members to see the Yucca Mountain site firsthand. The site is an invaluable national asset isolated in the Nevada desert, removed from all population centers, and co-located with the Nevada National Security Site. Since my previous visit in 2011, the landscape has notably advanced to support the development of a permanent repository.

In 2013, the D.C. Court of Appeals ruled the Nuclear Regulatory Commission must continue its review of the Yucca Mountain license application. The Court issued a writ of mandamus, a very consequential legal action, and declared it was illegal for the NRC to stop consideration of the license. As a result of this decision, NRC resumed the scientific and technical evaluation of the license, known as the Safety Evaluation Report (SER).

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Meanwhile, the costs of inaction and delay continue to mount. The Courts ruled the Department of Energy's dismantlement of the Yucca Mountain Project no longer constituted a permanent disposal program. Therefore, the Federal Government could no longer collect the Nuclear Waste fee, a surcharge paid by consumers of nuclear-generated electricity. While the fee is no longer being actively collected, the Treasury Department still maintains a balance of nearly $33 billion in ratepayer money to license, construct and operate Yucca Mountain.

But it isn't just ratepayers who are paying for the consequences of the delay. All American taxpayers, regardless of whether they benefit from commercial nuclear power, are footing the legal bill. And the bill isn't cheap. Last year, the Department of Justice account that pays damages on behalf of the Federal Government, known as the Judgement Fund, paid out over $900 million in settlements as a consequence of our inability to move forward with Yucca. This accounted for nearly a third of all Federal Government legal settlements.

We in the Federal Government have an obligation to uphold the law to dispose of commercial spent nuclear fuel, as well as honor the commitment made to States who host sites to support our nuclear defense activities, including South Carolina, Idaho and Washington State. Congress needs a willing partner to host a nuclear disposal facility, as we currently have with the sites that contributed to the Manhattan Project.

I am committed to working with state and local stakeholders in Nevada who will engage in a constructive conversation to resolve the current impasse. Just saying no is not an option. As part of this process, we will look for areas of agreement, such as facilitating a benefits package for communities to provide longterm budget stability, strengthen the State's education fund, and identify associated transportation infrastructure benefits.

As the host state of the Nevada National Security Site, however, Nevada already is a constructive partner with the Federal Government to protect our national interests. This, by the way, includes storing radioactive waste on site.

I look forward to hearing from a broad group of stakeholders today who will highlight the need to finish a repository, as the House of Representatives supports, as the Courts direct, and as the American people deserve.

OPENING STATEMENT OF HON. PAUL TONKO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. TONKO. Thank you, Mr. Chair. We are here this morning to hear from a fine panel of witnesses about the current state of nu-

clear waste policy. There are some things that I do not expect will have changed much from the time of our last hearing on this issue. Nuclear facilities across the country continue to generate waste that has yet to be secured in a long-term storage facility. Research and development on waste technologies continues. The law designating a storage facility is unchanged, and today we add to the many oversight hearings the subcommittee has held over the years.

But we still have no real solution, even an interim one, to offer to the witnesses at the table today and the constituencies that they do, indeed, represent. There have been reports by the National Academy of Sciences, the Government Accountability Office, industry and nongovernmental groups, and the President's Blue Ribbon Commission. Ironically, we have a long-term storage facility, and yet we do not. And we do not have interim storage facilities or a policy of establishing them, and yet we do. Essentially the storage facilities at each of the powerplant sites around the country now serve as de facto interim storage facilities.

We need a solution to this situation. It will not be easy, and it will be expensive. But the alternative is also expensive and provides less safety, less security than a functioning, ordered process for dealing with spent fuel. And Mr. Fitz reminds us that we also have to deal with legacy waste from our defense programs.

I know the chair and others on this committee are resolved to complete the process of opening the Yucca Mountain facility, but the Yucca Mountain facility is not open at this time, and it does not appear it will be open in the near future. In the meantime, spent fuel continues to accumulate, and penalty fees continue to accrue. I continue to believe that it is worth examining additional options for dealing with this waste.

The administration's strategy, based on the work done by the Blue Ribbon Commission in 2012, has challenges and unknowns. Should we pursue a system that includes both interim and long-term storage of waste? If so, how do we proceed? If there are to be interim sites, how many will be needed? How much waste can or should be stored at them, and what time period qualifies as interim? What are the costs, and can we access the necessary funds to the fund established to deal with this problem?

I do not expect to hear definitive answers to these questions this morning, but I do think it is time that we examined all options for moving forward. I think the future for nuclear power is in question if we do not find a way to deal with this issue.

I want to thank all of our witnesses for appearing before the subcommittee today. I look forward to your testimony and to your suggestions on options to move forward on what is a very critical and important issue.

And, with that, Mr. Chair, I yield back.

Mr. SHIMKUS. The gentleman yields back his time. Anyone seeking time on the majority side?

Seeing none, the chair recognizes the ranking member of the full committee, Mr. Pallone, for 5 minutes.

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. PALLONE. Thank you, Mr. Chairman.

I want to thank you and Ranking Member Tonko for holding this hearing today.

Much has changed since the Nuclear Waste Policy Act became law in 1982, which allowed the Secretary of Energy to remove spent nuclear fuel from commercial nuclear power plants in exchange for fees and transported to a permanent geological repository. But I think the past three decades of the nuclear waste program might be best summed up this way: Lots of change but very little progress.

Unfortunately, the one thing that seems most resistant to change is the program's ongoing failure to the ratepayers, who have paid into the fund. That failure also applies to the taxpayers, who are now having to pay damages through the Judgment Fund administered by DOJ. In New Jersey, we have several operating nuclear reactors that provide carbon-free electricity, and this includes Oyster Creek, the Nation's oldest operating plant, which will soon stop providing power but will continue to provide a home to spent nuclear fuel long into the future unless we can come together on a plan to fix this program.

My point is this: I am not interested in litigating the wisdom of the administration's actions with regard to Yucca Mountain because that won't help move waste out of New Jersey, Illinois, New York, Michigan, or anywhere else anytime soon. I am, however, interested in making progress, and I hope this committee will put the ratepayer and taxpayer first and focus on efforts that can be enacted into law and that will move us forward over the next few years. I am encouraged by recent developments on potential consensus sites for interim storage in Texas and New Mexico, and we should look closely at the prospects they offer. That in no way means we should curtail our push for a permanent repository, but I do believe the best path forward is to work to identify steps we can take now to set the stage for real reform on permanent disposal in the future, regardless of where the disposal facility ends up being sited.

Again, thank you for holding this hearing. I look forward to hearing from our witnesses and working with all my colleagues, stakeholders, and the administration to put our Nation's nuclear waste program back on track.

And I would yield the balance of my time to the gentleman from California, Mr. McNerney.

Mr. MCNERNEY. I want to thank the ranking member, and I thank the chairman of the subcommittee for his work on this issue. Managing nuclear waste is an engineering and a political problem. Based on the work I did as a graduate student for the Nuclear Engineering Department at the University of New Mexico, I believe the engineering problem can be solved safely and satisfactorily.

Experience has shown that in order to find a location with the support of the local community, we are going to need complete transparency and the involvement of the local community in order to be accepted by the local community.

More than $10 billion has been spent on the Yucca Mountain project, and that money may be wasted because there wasn't the transparency and local involvement that would be required. The current situation we have invites a Fukushima-style disaster to happen in this country because there is so much waste stored in so various locations as we will hear near the Columbia River and other places. So are we going to need a solution? I thank the chairman for his work, and I think we need to work together in a bipartisan way to find a way forward, Mr. Chairman.

And, again, I yield back.

Mr. SHIMKUS. The gentleman yields back his time.

Before we begin with the opening statements of our guests, I want to just point out that joining us is Congressman Dan Newhouse, a Member from Washington State, who has the honor and the challenge of representing the Hanford DOE site, which I think shows our common interest in moving forward on this.

Thank you for joining us.

I am going to move rapidly so we can get all our process through and hopefully have people return after they call votes.

So first at the panel and will be recognized for 5 minutes, Mr. Andrew Fitz, senior counsel, Office of the Attorney General, State of Washington.

Your full statement has submitted for the record.

You have 5 minutes, sir.

Pull that mic a little bit closer if you can. Move your name tag and then make sure the button is pressed on.

STATEMENTS OF ANDREW FITZ, SENIOR COUNSEL, OFFICE OF THE ATTORNEY GENERAL, STATE OF WASHINGTON; JOSEPHINE PICCONE, DIRECTOR, YUCCA MOUNTAIN DIRECTORATE, NUCLEAR REGULATORY COMMISSION; THE HONORABLE GREG R. WHITE, COMMISSIONER, MICHIGAN PUBLIC SERVICE COMMISSION, ON BEHALF OF THE NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS, CHAIRMAN, SUBCOMMITTEE ON NUCLEAR ISSUES, WASTE DISPOSAL; STEPHEN KUCZYNSKI, CHAIRMAN, PRESIDENT, AND CHIEF EXECUTIVE OFFICER, SOUTHERN NUCLEAR OPERATING COMPANY; GEOFFREY H. FETTUS, SENIOR ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL; AND EINAR RONNINGEN, MANAGER RANCHO SECO ASSETS, DECOMMISSIONING PLANT COALITION

STATEMENT OF ANDREW FITZ

Mr. FITZ. There we go. On behalf of the State of Washington, Office of the Attorney General, I appreciate the opportunity to be here before you today. Washington State has a keen interest in the development of a permanent repository for high-level radioactive waste and spent nuclear fuel. For nearly eight decades, we have honored our duty to temporarily house nuclear waste as a byproduct of our Nation's defense at the Department of Energy's Hanford Nuclear Reservation.

Waste from Hanford accounts for approximately 63 percent of the defense-generated high-level waste projected for disposal at Yucca Mountain. I should point out that our near-term concern is in get-

ting this waste out of failing underground single-shell tanks and into a glass form. But our long-term interest is in seeing that all this waste is properly disposed of in a deep geologic repository. That is what led us into litigation over the efforts to abandon Yucca Mountain in 2010.

The Federal Government's efforts to abandon Yucca Mountain have ignored and bypassed the careful process Congress set forth in the Nuclear Waste Policy Act for developing a national repository. Washington State has been clear in its legal arguments that if Yucca Mountain is determined to be technically unsuitable in the licensing process, it should not be built. But, absent that determination, the process Congress set forth in law for establishing the repository should be respected and upheld.

In passing the Nuclear Waste Policy Act, Congress recognized that accomplishing the long-term objective of a national repository requires a stepwise approach and a process cemented in law. The House bill report that accompanied the NWPA concluded that, "The failure of government to provide a permanent waste disposal facility during more than 30 years of Federal nuclear activities is unmitigated." It criticized prior Federal agency competence in "paper analyses and future plans" as failing to provide "adequate assurance that disposal facilities would be available when needed."

It noted that two prior attempts to explore potential repository sites had already failed due to intense political pressure, and it noted what it called a solid consensus of special task force and Presidential commission recommendations on the need for legislation to "solidify a program and keep it on track." In particular, the report noted "it is necessary to provide close congressional control to assure that the political and programmatic errors of our past experience will not be repeated." If it is to stand any chance of success, the process for developing a repository has to necessarily stand and withstand changes to Federal and State administrations and the political tides that accompany them. If you are going to complete a process measured in decades, you cannot be continually second-guessing or switching course partway through, or you will never accomplish the objective.

The thing that keeps you on course is and must be the law. This is at the heart of the NWPA's stepwise prescriptive structure. Critically, Congress reserved for itself the ultimate decision of approving a potential repository site. In the case of Yucca Mountain, Congress exercised that authority when it rejected Nevada's disapproval of the site. And later, when the D.C. Circuit Court of Appeals rejected Nevada's legal challenge to that recommendation to Congress, the court said: Congress has settled the matter, and we no less than the parties are bound by its decision.

Once a repository site is approved under the NWPA, it triggers a mandate for the Department of Energy to submit a construction authorization application to the NRC and an obligation on the NRC to consider Energy's application and issue a final decision approving or disapproving issuance of a construction authorization. Energy disregarded these mandates in 2010. It attempted to withdraw from the licensing proceeding based not on any claim that Yucca Mountain is technically unsuitable but on "the Secretary's judg-

ment that Yucca Mountain is not a workable option" and that "alternatives will better serve the public interest."

The NRC's Atomic Safety and Licensing Board agreed with our argument that the NWPA's plain language and legislative history did not permit the Secretary to withdraw the application. In the words of the board "the NWPA does not give the Secretary the discretion to substitute his policy for the one established by Congress in the NWPA, that at this point mandates progress towards a merits decision by the Nuclear Regulatory Commission." Energy's application thus remains pending before the NRC today.

As the committee may know, the NRC Chair nevertheless then initiated his own orderly shutdown of the NRC's license review. The shutdown included terminating the NRC staff's technical review, blocking the release of Safety Evaluation Reports and shutting down the NRC's Web-based licensing support network, which was a database for all the documentation regarding the application. Despite having more than $11 million available in appropriated funds to continue with licensing proceedings, the NRC cited budgetary considerations for its actions, including the political prediction that Congress would not further fund its efforts. It took Washington State and its fellow petitioners bringing a mandamus action and the court issuing an order in August 2013 to reverse this unilateral dismantling.

In a clear, blunt order, the Federal Court concluded that the NRC " has declined to continue the statutorily-mandated Yucca Mountain licensing process," and that "as things stand, the Commission is simply flouting the law." It rejected the NRC's budgetary arguments and cited the bedrock principle of constitutional law that "the President and Federal agencies may not ignore statutory mandates or prohibitions merely because of policy disagreement with Congress."

Here is where that leaves us. The NRC has now completed and released its Safety Evaluation Reports. We have final legal decisions in place that establish the obligation of both Energy and the NRC to continue with the Yucca Mountain licensing process providing the funding is in place to proceed.

I understand there are those who think that Yucca Mountain is technically unsuitable, but the law provides an opportunity to prove that case in the pending NRC hearing. I also understand there are those who think that following the current scheme in the NWPA is unwise, but the method for pursuing that disagreement should be through changing the law, not disregarding it. Ultimately, given the multi-decade, multi- generational task of developing a nuclear waste repository, we will never have a repository, whether it is at Yucca Mountain or any other site, if the legal process for siting and licensing a repository is disregarded, either now or by those who follow us. Thank you and I will be happy to take any questions.

[The prepared statement of Mr. Fitz follows:]

CONGRESSIONAL TESTIMONY OF ANDREW A. FITZ

SENIOR COUNSEL

WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL

Before the

U.S. HOUSE OF REPRESENTATIVES

COMMITTEE ON ENERGY AND COMMERCE

SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

Hearing on

Update on the Current State of Nuclear Waste Management Policy

MAY 15, 2015

Good morning, Chairman Upton, Ranking Member Pallone, Chairman Shimkus, Ranking Member Tonko, and distinguished members of the Subcommittee. On behalf of the State of Washington, Office of the Attorney General, I appreciate the opportunity to appear before you today.

Washington State has a keen interest in the development of a permanent repository for high-level radioactive waste and spent nuclear fuel. For nearly eight decades, we have honored our duty to temporarily house nuclear waste that is a by-product of our nation's defense. We are still hosting nearly two-thirds of the nation's defense related high-level radioactive waste at the Department of Energy's Hanford Nuclear Reservation.

The Hanford Reservation adjoins the Columbia River, just upstream of the cities of Richland, Kennewick, and Pasco. There are currently 56 million gallons of high-level waste stored in 177 massive underground tanks.[1] All of this waste is awaiting future treatment through vitrification, which is a process to solidify the waste into glass form.

As planned, the treatment process will concentrate the high-level radioactive component of this waste into Immobilized High Level Waste. Under the Nuclear Waste Policy Act (NWPA), this waste is supposed to be disposed of at a deep geologic repository. Hanford's Immobilized High Level Waste accounts for approximately 63 percent of the defense generated high-level waste projected for disposal at the Yucca Mountain repository. *Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca*

[1] Hanford is also storing more than 2,000 metric tons of spent nuclear fuel, 1,335 capsules of cesium, and 601 capsules of strontium. All of this waste is associated with defense production and all of it also requires disposal at a deep geologic repository.

Mountain, Nye County, Nevada, DOE/EIS-0250 (2002), Vol. II, App. A, § A.1.1.4.1 at A-8.

Our greatest near-term concern is getting high-level waste retrieved from storage and treated. Right now, that waste is in various forms of liquid, sludges, and solids. Nearly 30 million gallons of the waste is stored in single-shell tanks that are failing and have already leaked to soil and groundwater. Yet, as I speak, we are arguing with the Department of Energy (Energy) in federal court, trying to get the federal government to commit to a schedule for getting the Waste Treatment Plant complex up and running in a reasonable timeframe.

Our long-term interest is in seeing that all this waste is properly disposed of in a deep geologic repository, as Congress intended. That is what led us into litigation over the effort to abandon Yucca Mountain in 2010.

The federal government's efforts to abandon Yucca Mountain have ignored and by-passed the careful process Congress set forth in the NWPA for developing a national repository. Washington State has been clear in its legal arguments that the decision of whether to license the Yucca Mountain repository should be made on the merits by the Nuclear Regulatory Commission (NRC). If Yucca Mountain is determined to be unsuitable by the NRC's technical standards, it should not be built. But absent that determination, the process Congress set out in law for establishing a repository should be respected and upheld.

In passing the NWPA, Congress recognized that accomplishing the long-term objective of a national repository requires a stepwise approach and a process cemented in the law. The House bill report that accompanied the NWPA concluded that "The failure

of the government to provide a permanent waste disposal facility during more than 30 years of Federal nuclear activities is unmitigated." H.R. Rep. No. 97-491, Pt. 1, at 28 (1982), *as reprinted in* 1982 U.S.C.C.A.N. 3792, 3794. It criticized prior federal agency confidence in "'[p]aper' analyses and future plans" as failing to provide "adequate assurance that disposal facilities would be available when needed." *Id.* at 26. It noted that two prior attempts to explore potential repository sites had already failed due to intense political pressure. *See id.* at 27. And it noted what it called a "solid consensus" of special task force and Presidential commission recommendations on the need for legislation that would "solidify a program and keep it on track." *Id.* at 29. In particular, the report noted: "It is necessary . . . to provide close Congressional control and public and state participation in the program to assure that the political and programmatic errors of our past experience will not be repeated." *Id.* at 29-30.

If it is to stand any chance of success, the process for developing a repository has to necessarily span—and withstand—changes in federal and state administrations and the political tides that accompany them. If you are going to complete a process measured in decades, you cannot be continually second-guessing the policy or switching course part-way through, or you will never accomplish the objective. The thing that keeps you on course is, and must be, the law.

This is at the heart of the NWPA's stepwise, prescriptive structure. Again, it was intended to "solidify a program and keep it on track." Toward that end, the NWPA set out detailed, specific procedures for site nomination, site characterization, site selection, and repository licensing, with defined roles for Energy, the Environmental Protection

Agency, the NRC, potential host states, affected Native American tribes, and the President.

Critically, Congress reserved for itself the ultimate decision of approving a potential repository site. *See* 42 U.S.C. § 10135(c)-(g). In the case of Yucca Mountain, Congress exercised that authority when it rejected Nevada's disapproval of the site. In rejecting Nevada's challenge to the recommendation preceding Yucca Mountain's approval, the D.C. Circuit Court of Appeals said: "Congress has settled the matter, and we, no less than the parties, are bound by its decision." *Nuclear Energy Inst., Inc. v. Envtl. Prot. Agency*, 373 F.3d 1251, 1302 (D.C. Cir. 2004).

Once a repository site is approved, it triggers legal mandates for both Energy and the NRC. For Energy, it triggers a mandate to submit a construction authorization application to the NRC. 42 U.S.C. § 10134(b). For the NRC, it triggers a mandate to "consider" Energy's application and to issue a "final decision approving or disapproving the issuance of a construction authorization" within a specified timeframe. 42 U.S.C. § 10134(d).

Energy disregarded these mandates. It attempted to withdraw from the licensing proceeding based not on any claim that Yucca Mountain is technically unsuitable, but on "the [Energy] Secretary's judgment . . . that Yucca Mountain . . . is not a workable option" and that "alternatives will better serve the public interest." U.S. Department of Energy's Reply to the Responses to the Motion to Withdraw, *In re U.S. Dep't of Energy*, NRC No. 63-001, ASLBP No. 09-892-HLW-CAB04 at 31 n.102 (May 27, 2010).

The NRC's Atomic Safety and Licensing Board (Board) agreed with our argument that the NWPA's plain language, as supported by its legislative history, "does

not permit the Secretary to withdraw the Application that the NWPA mandates the Secretary file." *In re U.S. Dep't of Energy*, NRC No. 63-001, ASLBP No. 09-892-HLW-CAB04 at 3 (June 29, 2010). The Board concluded that the NWPA "directed both that [Energy] file the Application . . . and that the NRC consider the Application and issue a final, merits-based decision approving or disapproving the construction authorization application." *Id.* at 5. In the words of the Board, "the NWPA does not give the Secretary the discretion to substitute his policy for the one established by Congress in the NWPA that, at this point, mandates progress toward a merits decision by the Nuclear Regulatory Commission . . . ." *Id.* at 3. Energy's application thus remains pending before the NRC.

As the Committee may know, the NRC Chair nevertheless then initiated his own "orderly shutdown" of the NRC's license review, despite the decision of the Board and despite the fact that he did not have the votes on the Commission to overturn the Board's order. The shutdown included terminating the NRC staff's technical review of the license application; blocking the release of Safety Evaluation Report volumes; and shutting down the NRC's Web-based Licensing Support Network (LSN), which was a database for all documentation regarding the application. *See, e.g.*, Office of the Inspector General, Nuclear Regulatory Commission, "NRC Chairman's Unilateral Decision to Terminate NRC's Review of DOE Yucca Mountain Repository License Application," OIG Case No. 11-05 (June 6, 2011). Despite having more than $11 million available to continue its review, the NRC cited budgetary considerations for these actions, including the political prediction that Congress would not further fund its efforts.

It took Washington State and its fellow petitioners bringing a mandamus action—and the court issuing an order in August 2013—to finally stop the NRC's unilateral

dismantling of the process Congress directed. In a clear and blunt order, the federal court concluded that the NRC "has declined to continue the statutorily mandated Yucca Mountain licensing process" and that "[a]s things stand . . . the Commission is simply flouting the law." *In re Aiken County*, 725 F.3d 255, 259 (D.C. Cir. 2013) (*Aiken II*). It rejected the NRC's budgetary arguments and cited the bedrock principle of constitutional law that "the President and federal agencies may not ignore statutory mandates or prohibitions merely because of policy disagreement with Congress." *Id.* at 260.

Here is where that leaves us: The NRC has now completed and released its Safety Evaluation Report volumes. We have final legal decisions in place that establish the obligation of both Energy and the NRC to continue the Yucca Mountain licensing process, provided the funding is in place to proceed.[2]

I understand there are those who think that Yucca Mountain is technically unsuitable. But the law provides an opportunity to prove that case in the pending NRC

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[2] Representatives from both the Department of Energy and the Department of Justice have represented that Energy will proceed with the licensing process if mandated. *See, e.g.*, Respondents' Response in Opposition to Petitioner's Motion for Preliminary Injunction, filed April 23, 2010, in *State of Wash. v. U.S. Dep't of Energy*, No. 10-1082 (later consolidated with *Aiken I* petitions), at 16 ("However, if any NRC or court decision should require DOE to continue with the license application, a workforce can be reassembled and contracts can be renewed."); *In re U.S. Dep't of Energy*, NRC No. 63-001, ASLBP No. 09-892-HLW-CAB04 at 19-20 (June 29, 2010) ("The Board is confident that DOE can and will prosecute the Application before the NRC in good faith,[72] as we believe the NWPA requires." [n.72: "As counsel for DOE stated at argument, '[w]e will do what we're ordered to do.' Tr. at 78 (June 3, 2010)."]; Oral argument comments of Ellen Durkee, Department of Justice, *In re: Aiken County*, No. 10-1050 (*Aiken I*) (D.C. Cir. Mar. 22, 2011), at Tr. 26:9-27:6 ("JUDGE KAVANAUGH: If the NRC rejects DOE's effort to withdraw the license, will DOE comply?" / "JUDGE SENTELLE [sic–MS. DURKEE]: I think the DOE and Department of Justice recognize that when you have an order, you comply with that order until you can get it overturned." / "JUDGE KAVANAUGH: Yes. If it's not overturned on appeal will DOE comply?" / "MS. DURKEE: Yes. They have been clear throughout this process that if they were required in a non-appealable order and subject to funding, that they will comply and go forward with the license application process.").

hearing. I also understand there are those who think that following the current scheme of the NWPA is unwise. But the method for pursuing that disagreement should be through changing the law, not disregarding it. Ultimately, given the multi-decade, multi-generational task of developing a nuclear waste repository, we will never have a repository—at Yucca Mountain or elsewhere—if the legal process for siting and licensing a repository is disregarded, now or by those who follow us.

Thank you. I'll be happy to take any questions.

Mr. SHIMKUS. I appreciate it. I know you have traveled long distances and a lot, and I want to make sure you got your full statement in. But we are trying to keep quick.

I would now like to recognize Ms. Josephine Piccone, Director of Yucca Mountain Directorate from the Nuclear Regulatory Commission.

You are welcome, and you are recognized for 5 minutes.

STATEMENT OF JOSEPHINE PICCONE

Ms. PICCONE. Thank you. Good morning, Chairman Shimkus, Ranking Member Tonko, and distinguished members of the subcommittee. I am Josephine Piccone, Director of the Nuclear Regulatory Commission's Yucca Mountain Directorate, which is responsible for leading the current review activities associated with the Yucca Mountain construction authorization application.

I appreciate the opportunity to appear before you today to discuss the NRC staff's completion of the Yucca Mountain Safety Evaluation Report. On November 18, 2013, the NRC Commission approved a memorandum and order setting a course of action for the Yucca Mountain licensing process, consistent with the Appeals Court decision on August 2013, and the resources available from previous unexpended appropriations to the NRC from the Nuclear Waste Fund. This course of action included the Commission directing the NRC staff to complete the Safety Evaluation Report. We completed the Safety Evaluation Report this past January within our cost estimate. I would like to acknowledge our talented review team of more than 40 agency experts in technical fields such as health physics, geology, seismology, hydrology, material sciences, structural engineering, and criticality safety, to name but a few. We also had an excellent legal staff providing valuable support and assistance from the NRC's federally funded research and development center, the Center for Nuclear Waste Regulatory Analyses, in San Antonio, Texas.

The Safety Evaluation Report documents the results of the staff's technical review of DOE's application. The NRC staff finds that DOE has met most, but not all, of the applicable regulatory requirements. Notably, the NRC staff finds that DOE's design and analysis of the proposed repository complies with the performance objectives and requirements both before and after the repository is closed.

These performance objectives and requirements, which are protective of public health and safety, include the requirements that the repository be composed of multiple barriers, requirements for the repository to meet certain radiation limits for individual protection and human intrusion, and separate standards for protection of groundwater. The staff also finds that DOE has addressed most of the general information, administrative, and programmatic requirements.

There are two specific requirements that DOE has not met that concern ownership of land and water rights. They are discussed in detail in Volume 4 of the Safety Evaluation Report. In addition, a supplement to DOE's environmental impact statement addressing groundwater issues has not been completed. Therefore, the NRC

staff is not recommending issuance of a construction authorization at this time.

Publication of the Safety Evaluation Report is only one of several steps that need to occur before a decision can be made on the construction authorization application. A decision on whether to authorize construction can be made only after a supplement to DOE's Environmental Impact Statement has been prepared, a hearing has been conducted, and the Commission has completed its review of contested and uncontested issues. With regard to the first item, the Commission has directed the NRC staff to develop a supplement to DOE's Environmental Impact Statement covering certain groundwater issues.

The largest and most significant of the remaining steps to be completed before the Commission can reach a decision on whether to grant the construction authorization is the adjudicatory hearing, including consideration of approximately 300 pending contentions and any new or amended contentions. The NRC does not currently have sufficient remaining resources from the Nuclear Waste Fund to complete the hearing. Recently the Commission informed the Congress that it estimated that approximately $330 million would be needed for the NRC to complete the construction authorization proceeding.

This concludes my formal testimony on the NRC Safety Evaluation Report. I thank you for the opportunity to appear before you, and I look forward to continuing to work with you to advance NRC's important safety and security missions. I would be pleased to respond to questions you may have. Thank you.

[The prepared statement of Ms. Piccone follows:]

WRITTEN STATEMENT
BY JOSEPHINE PICCONE, Ph.D.
UNITED STATES NUCLEAR REGULATORY COMMISSION
TO THE
HOUSE COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY
MAY 15, 2015

Good morning, Chairman Shimkus, Ranking Member Tonko and distinguished Members of the Subcommittee. I am Josephine Piccone, Director of the Nuclear Regulatory Commission's Yucca Mountain Directorate, which is responsible for leading the current review activities associated with the Yucca Mountain construction authorization application. I appreciate the opportunity to appear before you today to discuss the NRC staff's completion of the Yucca Mountain Safety Evaluation Report.

The NRC is an independent Federal agency established to license and regulate the Nation's civilian use of radioactive materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment. As Congress outlined in the Nuclear Waste Policy Act of 1982, as amended, a role of the NRC is to promulgate requirements, and make licensing decisions on the design, construction, operation, and eventual decommissioning and closure of a geologic repository for permanent disposal of high-level waste at Yucca Mountain, Nevada.

The Department of Energy (DOE) submitted an application to the NRC in June 2008 seeking authorization to construct a geologic repository at Yucca Mountain. The NRC docketed the application for review in September 2008 and commenced its detailed technical review. In 2010, the DOE decided to shut down the Yucca Mountain Program and filed a motion to the NRC to withdraw the application. This motion was denied by the NRC's Atomic Safety and Licensing Board (ASLB), and in September 2011 the Commission announced it was evenly divided on whether to overturn or uphold this decision. The Commission, in recognition of

budgetary limitations, directed the ASLB to complete all necessary and appropriate case management activities. In September 2011, the ASLB issued an order suspending the adjudicatory proceeding, and at that time the NRC staff's technical review was closed. At that time, the NRC staff had completed and published Volume 1 of what would eventually be a five volume Safety Evaluation Report.

On August 13, 2013, a panel of the U.S. Court of Appeals for the District of Columbia Circuit issued its decision in the case *In re Aiken County,* directing the NRC to "promptly continue with the legally mandated licensing process" for DOE's application to construct a geologic repository for high-level waste at Yucca Mountain. The NRC promptly began taking steps to comply with the court's direction. On November 18, 2013, the Commission approved a memorandum and order setting a course of action for the Yucca Mountain licensing process consistent with the Appeals Court decision and the resources available from previous unexpended appropriations to the NRC from the Nuclear Waste Fund. This course of action included the Commission directing the NRC staff to complete the Safety Evaluation Report. The Commission continues to provide further direction to the NRC staff as needed.

The NRC staff completed the Safety Evaluation Report this past January within the cost estimate. I would like to acknowledge our talented review team of more than forty agency experts in technical fields such as health physics, geology, seismology, hydrogeology, material sciences, structural engineering, and criticality safety, to name a few. We also had an excellent legal team providing valuable support, and assistance from the NRC's federally funded research and development center, the Center for Nuclear Waste Regulatory Analyses in San Antonio, Texas.

The Safety Evaluation Report documents the results of the NRC staff's technical review of DOE's application. The NRC staff produced the report in five volumes, which are:

Volume 1: General Information, which was published in August 2010.

Volume 2: Repository Safety Before Permanent Closure (or "preclosure"), published in January 2015,

Volume 3: Repository Safety After Permanent Closure ("post-closure"), published in October 2014,

Volume 4: Administrative and Programmatic Information, published in December 2014, and

Volume 5: Proposed Conditions on the Construction Authorization and Probable Subjects of License Specifications, published in January 2015.

Volume 5 includes a brief summary of the findings in all the volumes. A short synopsis of the contents and findings of the SER, and NRC staff's overall recommendation for construction authorization follows.

NRC STAFF FINDINGS

The NRC staff finds that DOE has met most, but not all, of the applicable regulatory requirements. Notably, in the Safety Evaluation Report, the NRC staff finds, with reasonable assurance and expectation, that DOE's design and analysis of the proposed repository complies with the performance objectives and requirements both before and after the repository is closed. These performance objectives and requirements, which are protective of public health and safety, include the requirement that the repository be composed of multiple barriers; requirements for the repository to meet certain radiation limits for individual protection and human intrusion; and separate standards for protection of groundwater. The NRC staff also

finds that DOE has addressed most of the general information, administrative and programmatic requirements.

There are two specific requirements that DOE has not met. They concern ownership of land and water rights. They are discussed in detail in Volume 4, and I will explain them briefly in a moment. In addition, a supplement to DOE's environmental impact statement addressing groundwater issues has not been completed. Therefore, the NRC staff is not recommending issuance of a construction authorization at this time.

As discussed in detail in Volume 4 of the SER, the Geologic Repository Operations Area, which is part of the repository, must be located on lands that are either acquired and under the jurisdiction and control of DOE, or permanently withdrawn and reserved for its use. The land on which the repository operations area will be located must also be free and clear of significant encumbrances such as mining rights, deeds, rights-of-way or other legal rights. In its application, DOE explained that it submitted land withdrawal legislation to Congress in 2007. Congress did not enact this bill, and DOE has not completed any other land acquisition process. Therefore, the NRC staff concludes that DOE has not acquired lands needed for the repository operations area, nor have necessary lands been permanently withdrawn and reserved for DOE's use. In addition, because DOE has not completed a land withdrawal or other acquisition process, DOE has not demonstrated that such land would be free and clear of significant encumbrances.

DOE must also obtain rights to water needed to construct and operate the repository. In its application, DOE stated that it filed a water appropriations request with the Nevada State Engineer for the permanent rights to water from five wells within the proposed preclosure

controlled area. DOE stated that the Nevada State Engineer denied the request and that the U.S. Department of Justice, on behalf of DOE, appealed that decision. Litigation on this matter is currently stayed. Therefore, the NRC staff concludes that DOE has not obtained water rights that DOE determined may be needed to construct and operate the repository.

In addition to a summary of the NRC staff's findings in previous volumes and the NRC staff's conclusion that it would not recommend issuing a construction authorization at this time, Volume 5 identifies conditions the NRC staff proposes be included if the Commission authorizes construction. These include restrictions on some canisters and waste to be accepted at the repository; confirmation that flight restrictions credited by DOE in its analysis are in place; and the statutory emplacement limit of 70,000 metric tons for the repository. Should the applicant provide additional information, the NRC staff may remove or revise a condition, or could add one or more conditions, based on its review of that information.

NEXT STEPS

Publication of the Safety Evaluation Report is only one of several steps that need to occur before a decision can be made on the construction authorization application. A decision on whether to authorize construction can be made only after:

(1) a supplement to DOE's environmental impact statement has been prepared,

(2) a hearing has been conducted, and

(3) the Commission has completed its review of contested and uncontested issues.

With regard to the first step, the Commission has directed the NRC staff to develop a supplement to DOE's EIS covering certain groundwater issues. The NRC staff expects to complete the supplement using resources remaining from NRC's previous appropriations from the Nuclear Waste Fund. NRC will follow its usual National Environmental Policy Act process

for completing this document. The NRC staff published a notice in the Federal Register on March 12 of this year that it will develop a draft supplement to be issued for public comment in late summer of this year. The NRC staff expects to have public meetings on the draft supplement at NRC headquarters and in Nevada during the comment period. The final supplement will consider public comments and should be completed early in 2016.

The largest and most significant of the remaining steps to be completed before the Commission can reach a decision on whether to grant the construction authorization is the adjudicatory hearing, including consideration of approximately 300 pending contentions and any new or amended contentions involving matters of fact or law. This hearing would require several years to complete and would likely use multiple licensing boards. The NRC does not currently have sufficient remaining resources from the Nuclear Waste Fund to complete this hearing. Recently, the Commission informed the Congress that it estimated that approximately $330 million would be needed for the NRC to complete the construction authorization proceeding.

CLOSING

Chairman Shimkus, Ranking Member Tonko, and distinguished Members of the Subcommittee, this concludes my formal testimony on the NRC's Safety Evaluation Report. I thank you for the opportunity to appear before you. I look forward to continuing to work with you to advance the NRC's important safety and security missions. I would be pleased to respond to any questions you may have. Thank you.

Mr. SHIMKUS. Thank you very much.

Next, we have the Honorable Greg R. White, Commissioner of Michigan Public Service Commission, on behalf of the National Association of Regulatory Utility Commissioners, Chairman of the Subcommittee on Nuclear Issues and Waste Disposal. He has appeared here numerous times.

You are recognized for 5 minutes, and thanks for coming.

STATEMENT OF THE HONORABLE GREG R. WHITE

Mr. WHITE. Thank you very much, Chairman Shimkus, Ranking Member Tonko, and members of the subcommittee.

I want to thank you for this opportunity to testify on the status of the U.S. nuclear waste program. I am Greg White. I serve as commissioner on the Michigan Public Service Commission. I am testifying today on behalf of NARUC, National Association of Regulatory Utility Commissioners.

NARUC is a nonprofit organization. It has been around for over 125 years. Members are the public utility commissions in all 50 States and U.S. territories. We are State economic regulators, and we are responsible for ensuring the safe, reliable, and affordable delivery of essential electric utility service in every state. As a result, the success of this program is critical to the delivery of essential electric services.

I would like to raise a few points and then offer some comments in regards to what we think might be able to be done going forward. NARUC was at the table when the 1982 law was passed, and we agreed that it was appropriate for the consumers to pay for this program. The people who benefit from the generation of electricity from nuclear power plants appropriately should pay for it. And the consumers have paid. I would like to point out that the only milestone in the 1982 act that was ever on time was the signing of the contracts that began the collection of money from the consumers. Since then, more than $40 billion has been collected in direct payments and in interest that has accrued in the balance. The current status of the program, the same as it was in 1982; we don't have anything moving forward. The program is at a dead stop.

A couple of other points. I also serve as the chairman of an organization called the Nuclear Waste Strategy Coalition that was formed in 1993. It is a group of State commissions, utility, nuclear utilities, consumer advocates, local communities, and we were formed in 1993. I can tell you that, as somebody who was in the room in 1993, we didn't intend or ever expect that we would still be an organization working on this issue in 2015, some 22 years later.

We also proposed way back in 1994, the Nuclear Waste Strategy Coalition, the creation of a single-purpose entity, a public-private corporation chartered by the Congress to manage this program, removing it from the Department of Energy. That was in 1994. The proposal was rejected pretty much out of hand. The argument was by moving to that new entity, it could delay the progress on the program by up to a year.

We have been involved in several lawsuits, as you know. They have been explained by Mr. Fitz. Chairman Shimkus, I would like to point out one in particular, the suspension of the Nuclear Waste

Fund, which we argued we needed to do. We considered that to be a bittersweet win. It was always our intention to pay for the program, to have the consumers pay for the program. But when there was no program after 2010, we could no longer continue to allow hundreds of millions of dollars to be collected from consumers into a fund that was paying for nothing.

So the Department of Energy has had some plans, I will say "schemes," perhaps. The problem is, is that they really have no credibility. There is no budgets. There is no time frames, other than the proposal that was made in 2013 as a result of the Blue Ribbon Commission's recommendations suggested that the Department would make substantial progress towards a national repository by 2048, some 35 years from that date.

My suggestion is, we seem to have learned nothing in the previous 32 years that led up to that point.

So, in conclusion, NARUC has thoughtfully considered the country's viable options. And we think that to move forward on a nuclear waste program, that we have to see credible substantial progress toward achieving the goal. The first step is to complete the licensing review of the Yucca Mountain license application. We also believe that the Nuclear Waste Fund must be managed responsibly and used only for its intended purpose. The management of the Federal responsibilities for integrated-use fuel management would be more successful if it was assigned to a new organization, such as the charter of a new Federal corporation, suggested by the Nuclear Waste Strategy Coalition back in 1994. And, in addition, we believe that there is a need for consolidated interim storage although the amount, basis of need, and duration should be determined.

If implemented in the near term, these steps could create a solid foundation on which to build a viable spent nuclear program. I want to thank you for the opportunity to express my views, and I will be very pleased to take questions.

[The prepared statement of Mr. White follows:]

Testimony on behalf of the
National Association of Regulatory Utility Commissioners

by

The Honorable Greg R. White
Commissioner, Michigan Public Service Commission
Chairman, NARUC Subcommittee on Nuclear Issues-Waste Disposal

before the

United States House of Representatives
Committee on Energy & Commerce
Subcommittee on Environment and the Economy

hearing on

UPDATE ON THE CURRENT STATUS OF NUCLEAR WASTE MANAGEMENT POLICY

MAY 15, 2015

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The Honorable Greg R. White
Commissioner, Michigan Public Service Commission
Chairman, NARUC Subcommittee on Nuclear Issues-Waste Disposal

Summary of Testimony
UPDATE ON THE CURRENT STATUS OF NUCLEAR WASTE MANAGEMENT POLICY

MAY 15, 2015

- NARUC has played an active role in federal nuclear waste management from the beginning. We were at the table for the discussions that lead to the Nuclear Waste Policy Act of 1982. We agreed that ratepayers should contribute to the Nuclear Waste Fund to support the federal waste disposal program.

- Consumers of electricity generated by nuclear plants have paid more than $40 billion to support the licensing of the Yucca Mountain facility. The obligation to pay for the lack of a repository continues to burden taxpayers via the judgment fund. Yet, in the current circumstance, there is nothing to show for the money poured into the program.

- The efforts to shut down the Yucca Mountain Licensing project—the nation's only permanent repository for high-level spent nuclear fuel *authorized by law*—puts the country in the exact same status we occupied 33 years. So far, Yucca Mountain represents a $15 billion investment, decades of scientific study, and - since the recent decision to "kick the cask" down the road again – a wasted (but hopefully only delayed) opportunity that can only increase the final costs of disposal.

- In the current circumstances, it is clear the U.S. still lacks a nuclear waste program, but the accumulation of waste continues.

- NARUC endorses a permanent solution, beginning with first completing licensing review for Yucca Mountain, along with shifting the management of, and providing direct access to funds from, the Nuclear Waste Fund. Developing an interim storage plan with these prerequisites could save ratepayer dollars. We are anxious to work with Congress to quickly adjust and more tightly focus the program.

Good morning Chairman Shimkus, Ranking Member Tonko, and members of the Subcommittee on Environment and the Economy. Thank you for the opportunity to testify today on the state of the United States' Nuclear Waste Management Policy. My name is Greg White, and I am a Commissioner on the Michigan Public Service Commission. I have the honor of serving as Chair of the National Association of Regulatory Utility Commissioners (NARUC) Subcommittee on Nuclear Issues – Waste Disposal. My testimony today is on behalf of NARUC and will focus on the perspectives of State utility regulators.

NARUC is a non-profit organization founded in 1889. Our members are the public utility commissions in all 50 States and the U. S. territories. NARUC's mission is to serve the public interest by improving the quality and effectiveness of public utility regulation. Our members regulate the retail rates and services of electric, gas, water, and telephone utilities. We are obligated under the laws of our respective States to assure the establishment and maintenance of essential utility services as required by public convenience and necessity and to ensure that these services are provided under rates, terms, and conditions of service that are just, reasonable, and non-discriminatory.

State economic utility regulators are responsible for ensuring the safe, reliable, and affordable delivery of essential electric utility service in every State across the country. Therefore, the success of the federal nuclear waste

management program, which is paid for by the consumers of electricity generated from the nation's nuclear power plants, is necessarily of keen interest. Both NARUC and its member commissions have dedicated a tremendous amount of time and resources to ensure that electricity consumers receive the services they have paid for.

NARUC and its State Commission members were at the table when the Nuclear Waste Policy Act of 1982 (NWPA) was developed and passed.

State regulators agreed that users of electricity that is generated at the nation's nuclear power plants should pay for the federal nuclear waste management and disposal program.

And the consumers have since paid and paid and continue to pay.[1]

Since 1982, more than $40 billion in direct payments and interest have been paid into the U.S. Nuclear Waste Fund.[2]

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[1] Ratepayers may be temporarily off the hook, courtesy of NARUC's lawsuit against DOE, but the American taxpayer is still liable for DOE's failure to accept waste for storage. See, e.g., *Statement of Kim Cawley, Chief, Natural and Physical Resources Cost Estimates Unit, The Federal Government's Liabilities Under the Nuclear Waste Policy Act, before the Committee on the Budget, U.S. House of Representatives* (October 7, 2007), online at: http://www.cbo.gov/sites/default/files/10-04-nuclearwaste.pdf. ("In the absence of a federal underground repository to accept nuclear waste for storage, taxpayers... pay—in the form of legal settlements with utilities—for a decentralized waste storage system at sites around the country. (Those payments are being made from the Department of the Treasury's Judgment Fund.) ...DOE currently estimates that payments to utilities pursuant to such settlements will total at least $7 billion . . .more if the program's schedule continues to slip. Regardless of whether or when the government opens the planned repository, those payments are likely to continue for several decades."); See also, *Harry Reid's Nuclear Taxpayer Waste, The legal bills for killing Yucca Mountain are billions and climbing,* Wall Street Journal (April 6, 2015), at: http://www.wsj.com/articles/harry-reids-nuclear-taxpayer-waste-1428362176. ("We've been telling you about Harry Reid's bargain . . . to kill the Yucca Mountain nuclear waste site in Nevada in return for all but shutting down the Senate. It turns out the deal is even more expensive than that. That's clear from a Monday report by the National Law Journal, which reviewed federal payouts ***in 2014*** to resolve litigation against the government. The Energy Department was the biggest spender, accounting for nearly one-third ($929 million) of the $3 billion the feds forked over in verdicts or settlements.")

And for all of those billions of dollars, so far, the ratepayers have nothing to show for it. Under the current state of the nuclear waste management program, we have absolutely nothing to show for this vast collection of ratepayer's money.

The efforts to shut down the Yucca Mountain Licensing project—the nation's one and only permanent repository for high-level spent nuclear fuel *authorized by law*—puts the country in the exact same status we occupied 33 years ago in 1982. Federal officials continue to "kick the cask" down the road—eliminating any impetus for real progress on the waste problem.

After decades of scientific study and an investment of over $15 billion dollars in the Yucca Mountain geologic repository,[3] the Administration, claiming simply that the site is not "practical," has unsuccessfully attempted to withdraw the Yucca Mountain license and illegally dismantled the program to oversee the project through completion.[4]

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[2] According to the U.S. Department of Energy Office of Inspector General's, *AUDIT REPORT – Department of Energy's Nuclear Waste Fund's Fiscal Year 2014 Financial Statement Audits* (November 2014), at 2, online at: http://energy.gov/sites/prod/files/2014/12/f19/OAS-FS-15-03.pdf, "[a]s of September 30, 2014, the U.S. Treasury securities held by the Department related to the NWF had a market value of $39.8 billion." This necessarily excludes the billions in ratepayer dollars already expended to characterize the Yucca Mountain site.

[3] In 1987, Congress directed U.S. Department of Energy (DOE) to focus on Yucca Mountain as the permanent repository. Over the next 20 years, DOE completed 5-mile and 2-mile tunnels into the mountain, including more than 180 boreholes to conduct experiments. By 2006, a Senate Environment and Public Works Committee report called Yucca Mountain the "Most Studied Real Estate on the Planet." See, http://www.epw.senate.gov/repwhitepapers/YuccaMountainEPWReport.pdf.

[4] DOE, the President, and Congress approved Yucca Mountain in 2002 after a very public deliberative process that included public meetings and requests for public comment. There is no record of any public process in advance of the Administration's 2010 decision to terminate the license proceedings.

Currently, there is no nuclear waste program, despite the exhaustive studies and billions in ratepayer and taxpayer dollars spent. All that remains is the nuclear waste. And the waste of American's regulatory fees and taxes.

And in the face of this static federal policy, spent nuclear fuel, and high-level nuclear waste continues to accumulate at plant sites. At some retired plant sites, the land cannot be reclaimed because waste remains stored on-site awaiting disposal in a permanent repository.

NARUC has been active on this issue since the beginning—33 years and counting.

Recognizing there would be problems and obstacles to the program, NARUC established a "Subcommittee on Nuclear Issues – Waste Disposal" in 1984.

A few years later, we created an office dedicated to tracking the federal nuclear waste management program.

We have participated in numerous lawsuits against the U.S. Department of Energy (DOE), consistently seeking better performance and greater accountability from the federal government while protecting the interests of electricity consumers.

The first of these lawsuits was in 1995, where we successfully countered the DOE's contention that they were not even obligated to take the nuclear waste from the plants by January 31, 1998.

More recently, we fought the inaction of DOE and the U.S. Nuclear Regulatory Commission (NRC) in the courts, and again the courts have responded with judgments agreeing with our positions.

NARUC argued that NRC was in violation of the law when it suspended its review of the Yucca Mountain license application, and in August 2013, the court agreed with us.[5]

Later that year, in November 2013, the courts granted our request that the DOE suspend collection of the Nuclear Waste Fund fees.[6]

On the latter, I consider the court's decision to be bittersweet. As noted previously, NARUC has always agreed with and supported the arrangement whereby the consumers of electricity paid for the nuclear waste management and disposal program under the auspices of the NWPA.

However, when the Administration threw out a $15 billion dollar investment along with 30 years of work towards a repository, and replaced it with nothing, we had no choice but to seek to cut funding for a program that no longer existed.

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[5] See, *In Re: Aiken Count, et al.*, which notes: ("Our more modest task is to ensure...agencies comply with the law as it has been set by Congress. Here, the Nuclear Regulatory Commission has continued to violate the law governing the Yucca Mountain licensing process. We therefore grant the petition for a writ of mandamus."), at: http://www.cadc.uscourts.gov/internet/opinions.nsf/BAE0CF34F762EBD985257BC6004DEB18/$file/11-1271-1451347.pdf

[6] See, *National Association of Regulatory Utility Commissioners v. DOE*, Case No. 11-1066 (Nov. 19, 2013), at: http://www.cadc.uscourts.gov/internet/opinions.nsf/2708C01ECFE3109F85257C280053406E/$file/11-1066-1466796.pdf.

Of late, our considerable efforts have produced little more than frustration. However, we continue to believe that there are opportunities to forge ahead with a nuclear waste management program that can achieve success. But we need the Congress and the Administration to work on near-term actions to give consumers of electricity from nuclear power plants the nuclear waste management program they paid for and deserve.

NARUC's has thoughtfully considered the country's viable options. To move forward with a successful U.S nuclear waste management program:

1) America needs a permanent solution to nuclear waste disposal, and we need to see credible, substantial progress toward achieving this goal. The first step must be to complete the licensing review for the Yucca Mountain repository project.
2) The Nuclear Waste Fund must be managed responsibly and used only for its intended purpose. The program must have access to the revenues generated by consumers' fee payments, once they resume, and to the balance of the Nuclear Waste Fund.
3) The management of federal responsibilities for integrated used fuel management should be more successful if assigned to a new organization. Congress should charter a new federal corporation

dedicated solely to implementing the nuclear waste management program and empowered with the authority and resources needed to succeed.

4) Some consolidated interim storage is needed, although the amount, basis of need, and duration should be determined. A program to develop one or more interim storage facilities at volunteer sites makes good sense, with priority given to the used fuel from decommissioned reactors.

If implemented in the near term, these steps create a solid foundation on which to build a viable spent nuclear fuel management program.

Thank you again for the opportunity to express these views. I would be pleased to take any questions at this time.

Mr. SHIMKUS. Thank you very much.

Next, we will recognize Mr. Stephen Kuczynski, chairman, president, and chief executive officer of the Southern Nuclear Operating Company.

You are recognized for 5 minutes, and welcome.

STATEMENT OF STEPHEN KUCZYNSKI

Mr. KUCZYNSKI. Good morning, Chairman Shimkus, Ranking Member Tonko, and the members of the subcommittee. I also thank you for the opportunity to appear before you today. As stated, my name is Steve Kuczynski. I am the chairman, president, and CEO of the Southern Nuclear Operating Company. We have been in the nuclear power business for over 50 years. Today our fleet of six nuclear reactors at three sites, Plant Hatch and Plant Vogtle in Georgia, and Plant Farley in Alabama, provide approximately 20 percent of the electricity used in those States. We are also building two new state-of-the-art nuclear units at Plant Vogtle.

It is an honor for me to appear before the subcommittee to discuss nuclear waste policy in general. Essential to this discussion is, of course, the need for a permanent repository. It is critical that the Federal Government meet its contractual obligation to take title to the Nation's spent fuel inventory. It is appropriate for the subcommittee to explore ways to get the statutorily mandated spent nuclear fuel disposal program back on track. I look forward to discussing these and other issues with you today.

Let me begin with a brief discussion about our company's spent fuel program. Currently we have 2,300 fuel assemblies and spent fuel pools at Plant Farley, another 930 assemblies in dry casks. At Plant Hatch, we have approximately 5,000 assemblies in the pools with 4,150 in dry casks. At Plant Vogtle, we have 2,600 assemblies in the pools and 480 in dry casks.

First thing I want to emphasize is that we have safe, reliable, onsite options to store spent fuel at our nuclear plants for the duration of our plant licenses and the expected life of the plants. Spent fuel pools and dry cask storage installations are regulated and approved by the NRC under very comprehensive safety, security, and environmental regulations. But these temporary measures should not be viewed as de facto permanent solutions to the spent fuel disposal issue.

Under both law and contract, disposal of spent fuel is an obligation of the Federal Government. My written testimony explains in some more detail how this came to be. I won't repeat that history here, other than to say that the Nuclear Waste Policy Act directed the Energy Secretary to enter into contracts with the Nation's nuclear utilities. Those contracts provided that, in return for payment of the fees into the Nuclear Waste Fund, the government will take title to nuclear powerplant owner spent fuel for permanent storage at the Nation's repository beginning in 1998.

Industry was effectively mandated to enter into these contracts. Under these contracts, Alabama Power has paid over $399 million into the Nuclear Waste Fund for Plant Farley, and Georgia Power has paid over $400 million for Plant Hatch and $445 million for plant Vogtle. Those are real dollars obtained from electricity customers in our States on the basis of spent fuel contracts with the

Federal Government. 1998 came and went. Seventeen years later, the Federal Government still has not begun to perform its end of the contracts. My written testimony explains nuclear powerplant owners have been forced to make other onsite arrangements to store our spent fuel temporarily at great expense to our companies.

The industry has mitigated these losses to some degree by recovering monetary judgments from the Federal Government on the basis of partial breach of contract claims. These recoveries have been limited so far to the cost for storage facilities made necessary by the government's breach. The Government Accountability Office has estimated that, in total, across the industry, Federal Government's liability for breach of the spent fuel contracts will exceed $21 billion by 2071.

That is a brief summary of the current situation, but the news is not all negative. There is increasing confidence that the Nation's nuclear waste disposal program is getting back on track. With recent court rulings requiring further action on the Yucca license application and the NRC's recent reports finding Yucca Mountain to be safe. The Nation has come too far and invested too much to abandon the Yucca Mountain repository now.

In closing, I applaud the subcommittee for taking keen interest and tackling this complex and challenging problem. The good news, it is not an insurmountable issue. Indeed, from a technical, safety, financial, and legal perspective, the path forward is manageable and understood. In many respects, the key challenges are political and the domain of Congress to address.

Let me finish with three final thoughts for you to consider. First and number one, the Nation should move forward with the permanent repository at Yucca Mountain. I believe that is clear. Two, Congress should reform the funding mechanisms for these programs to ensure access to the Nuclear Waste Fund for appropriate uses. The key challenge has been the program relies on appropriations which has been subject to the ebbs and flows of politics. And, three, Congress needs to protect the investment of electricity customers around the country who have collectively paid billions of dollars to the Federal government to dispose of the Nation's spent fuel inventory.

Thank you, Chairman Shimkus, for allowing me to appear before you here today and the subcommittee. I look forward to your questions.

[The prepared statement of Mr. Kuczynski follows:]

Statement of Stephen E. Kuczynski
Chairman, President and Chief Executive Officer
Southern Nuclear Operating Company, Inc.

BEFORE THE U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY & COMMERCE
SUBCOMMITTEE ON ENVIRONMENT & THE ECONOMY

"*Update on the Current Status of Nuclear Waste Management Policy*"

May 15, 2015

SUMMARY

- At Southern Nuclear, our safety focus continues throughout the nuclear fuel cycle. We are dedicated to maintaining the highest standards for safely handling radioactive waste to protect the public, the environment and our employees. We have safe, reliable on-site options to store spent nuclear fuel (SNF) at our nuclear plants for the duration of our plant licenses and the expected life of the plants.

- Although the industry has demonstrated that SNF can be safely stored in spent fuel pools or dry casks, the federal government and the general public should not view these temporary measures as a de facto permanent solution to the SNF disposal issue. Under the Nuclear Waste Policy Act and the DOE's Standard Contract with the nuclear utilities, SNF disposal is the federal government's obligation. In fact, the federal government has made the Standard Contract with DOE a prerequisite for the issuance or renewal of nuclear power plant licenses.

- On the basis of these contracts, Southern Company entities have paid over $1.2 billion into the Nuclear Waste Fund (NWF). Nationwide, contributions to the NWF have exceeded $30 billion (inclusive of interest allocation). The federal government, however, has yet to build the permanent SNF repository that is required by the NWPA and the Standard Contract.

- While there is good reason for optimism, such as recent court rulings affirming the requirements of the NWPA and the NRC's issuance of the safety reports for the Yucca Mountain repository, we also recognize that sustaining progress has been elusive. Failing to move forward with the permanent repository at Yucca Mountain would have several adverse impacts, such as prolonging regulatory uncertainty for the nuclear industry and unfairly creating concern on the part of the public about nuclear power at a time when nuclear energy is absolutely critical to meeting the nation's economic, energy, and environmental needs. In addition, lack of action on a permanent repository will require nuclear power plant operators to continue to manage, secure, and oversee SNF storage systems, which take up valuable space at power plants, create additional site security concerns, and drive up the costs for operating nuclear reactors. As importantly, inaction will only serve to impose increased costs on the federal government and taxpayers.

- This testimony concludes with general observations about various nuclear waste policy issues, ranging from interim storage and the Blue Ribbon Commission recommendations to nuclear waste fees and spent fuel prioritization.

Good morning Chairman Shimkus, Ranking Member Tonko, and Members of the Subcommittee. Thank you for the opportunity to appear before you today.

My name is Steve Kuczynski, and I am the Chairman, President and CEO of Southern Nuclear Operating Company, Inc., where I am responsible for the operation of a fleet of six nuclear power units at three sites as well as the construction of two new reactors at Plant Vogtle near Augusta, Georgia. It is an honor to appear before this Subcommittee to share my views on nuclear waste policy generally. Central to this discussion is, of course, a significant and challenging, yet entirely achievable, energy policy objective: completion of a permanent repository for the nation's spent nuclear fuel (SNF) as currently required by the Nuclear Waste Policy Act (NWPA). Other relevant issues also merit discussion as part of this conversation, such as SNF contracts and related claims for DOE's breach of contract, operation of spent fuel pools and dry cask systems, prioritization of SNF removal from certain sites, the possibility of centralized interim storage facilities, among other things. I look forward to discussing these issues with you today.

During my career, I have been responsible for a wide range of issues at nuclear power plants—from safety, training and emergency preparedness to radiation protection, operations, and construction. In my testimony today, I will discuss Southern Company's fleet of nuclear power plants, including the ongoing construction of our two newest reactors. I will also share some reasons why I believe it is imperative for our nation to move forward with the national repository at Yucca Mountain, focusing on the ways such action would help support sound energy policy and would mitigate the tremendous costs already incurred as a result of the government's failure to open a permanent repository. My testimony will conclude with a few

general observations for the Subcommittee to review and consider as you delve deeply into significant nuclear waste policy questions.

Southern Nuclear

Headquartered in Birmingham, Alabama, Southern Nuclear is a subsidiary of Southern Company, the nation's premier energy company serving the Southeastern United States through its subsidiaries. Southern Nuclear currently operates six nuclear reactors: Units 1 and 2 at Plant Farley near Dothan, Alabama; Units 1 and 2 at Plant Hatch near Baxley, Georgia; and Units 1 and 2 at Plant Vogtle near Augusta, Georgia.[1] We have been in the nuclear power business for almost 50 years, dating back to Southern Company's decision in 1967 to build Plant Hatch, our very first nuclear power plant, which began commercial operation in 1975. Together, Plants Farley, Hatch and Vogtle provide approximately 20% of the electricity used in Alabama and Georgia. This is made possible by our talented and committed workforce of over 4,000 men and women working at our fleet of nuclear power plants and corporate offices, all of whom are also part of the larger Southern Company team of over 26,000 employees across the States of Alabama, Florida, Georgia, and Mississippi.

Nuclear power is a leading source of affordable, reliable, clean, American energy that can power our economy, protect our environment, and provide jobs for thousands of our fellow citizens. Southern Nuclear's top priority is the safety and health of the public and our employees. We are committed to the safe operation of our nuclear generating facilities with equipment and systems that meet rigorous safety and design regulations. Plants Farley, Hatch and Vogtle are national leaders in safe operation and reliability with an average three-year fleet capability factor of 92.62% from 2012 to 2014, which exceeded the national average of 88.96% for the same

[1] Plant Farley is owned by Alabama Power Company. Plants Hatch and Vogtle are co-owned by Georgia Power Company, Oglethorpe Power Corporation, the Municipal Electric Authority of Georgia, and Dalton Utilities.

period.[2] Just last month, the U.S. Nuclear Regulatory Commission (NRC) completed the 2014 site assessment and concluded that our nuclear power plants met all of the NRC safety standards and that there were no major issues. With the nation's increasing focus on reducing emissions of carbon dioxide (CO_2), we are proud that our existing fleet of nuclear reactors prevents more than 56 million metric tons of CO_2 from entering the atmosphere, which is the equivalent of taking 10 million cars off the road—more than the number of cars registered in Alabama and Georgia, combined.

Delivering the Next Generation of Nuclear Power

Southern Company is leading the nation by constructing two new nuclear units at Plant Vogtle (currently anticipated to begin commercial operation in 2019 and 2020, respectively). Taken together, these state-of-the-art Westinghouse AP1000 units are projected to supply over 2,200 megawatts (MW) of new, baseload, zero-emission electric generation, creating more than 5,000 total construction jobs and 800 permanent jobs. These are some of the first new nuclear units to be built in the United States in over 30 years. Enormous in size and complexity, the Vogtle site is among the largest ongoing construction projects in the United States. This is a joint effort with our power plant ownership team, which includes Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and Dalton Utilities, and a construction consortium consisting of Westinghouse Electric Company LLC and Stone & Webster, Inc. Throughout the duration of this construction project, just as with the operation of our existing plants, safety always comes first. We remain focused on completing Vogtle 3 and 4 with safety, quality, and compliant construction as top priorities. We will not compromise.

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[2] *See* Fourth Quarter 2014 Data File, World Ass'n of Nuclear Operators (Mar. 9, 2015) (on file with Southern Nuclear Operating Company, Inc.). Capability factor measures the amount of time the plant is on-line and producing electricity. For more information about the nuclear industry's 2014 performance measures, please visit http://www.nei.org/CorporateSite/media/filefolder/Policy/WANO%20performance%20indicators/INPO-Performance-Indicators-2015.pdf?ext=.pdf.

Storage of Spent Nuclear Fuel

Our safety focus continues throughout the nuclear fuel cycle at all our nuclear plants. We are dedicated to maintaining the highest standards for safely handling radioactive waste in a manner that protects the public, the environment and our employees. We have safe, reliable on-site options to store SNF at our nuclear plants for the duration of our plant licenses and the expected life of the plants.

A short explanation of nuclear fuel may be useful. Before use in a nuclear reactor, fuel pellets (comprised of uranium or other fissionable elements) are placed into long tubes made of a noncorrosive material. These tubes are grouped together into a bundle (referred to as a fuel bundle or fuel assembly). A single fuel bundle for a boiling water reactor (BWR) contains 63 or 92 fuel tubes. A BWR reactor core contains 560 fuel bundles. A single fuel assembly for a pressurized water reactor (PWR) contains 264 fuel tubes. A PWR reactor core contains 157 or 193 fuel assemblies.

After a uranium fuel bundle or assembly in a nuclear power reactor has been irradiated and has produced electricity for between 36 to 72 months, it is no longer reactive enough to efficiently produce electricity. It is, however, still radioactive and must be stored after it is removed from the reactor core. Generally speaking, the fuel is stored in one of two ways: (1) in a spent fuel pool, which places the radioactive fuel rods beneath approximately twenty feet of water for shielding and cooling, or (2) after cooling in the spent fuel pool for 5–10 years, in dry casks and/or canisters, which are large welded or bolted metal canisters into which numerous bundles or assemblies are placed. After being loaded with SNF, these canisters are typically placed inside large concrete overpacks for additional shielding. Table 1 provides information

about the number of fuel assemblies in the spent fuel pools and dry casks currently at each of our nuclear power plants.

Table 1. Total number of fuel assemblies in spent fuel pools vs. dry cask (approx. figures)

Nuclear Power Plant	Spent Fuel Pools	Dry Casks
Plant Farley (PWR)	2,300	930
Plant Hatch (BWR)	5,000	4,150
Plant Vogtle (PWR)	2,600	480

Spent fuel pools and dry casks are regulated and approved by the NRC under comprehensive safety, security, and environmental regulations.[3] The spent fuel pools themselves are located within the reactor buildings of the power plant structures, while loaded dry casks are stored in appropriate areas on the plant sites, but outside the structures. Both the pools and casks are located within the security protected area of the plant.[4] In addition, Southern Nuclear has dry cask storage campaigns at each of our nuclear power plants, usually on an annual basis, to ensure we maintain adequate room in our spent fuel pools. Although not an NRC requirement, our fleet objective is to maintain dual core offload capability. At the plants where the two reactors share a spent fuel pool, this means maintaining enough room to simultaneously move the fuel out of both reactors into the spent fuel pool. Loading plans to transition SNF from the spent fuel pools into dry casks are established to support this objective, when possible. We agree with the NRC's position, as supported by recent NRC studies, that "spent fuel pools and dry casks both provide

[3] *See* Spent Fuel Storage Regulations, Guidance, and Communications, U.S. Nuclear Regulatory Comm'n http://www.nrc.gov/waste/spent-fuel-storage/regs-guides-comm.html (last updated Apr. 28, 2015).

[4] Additional safety measures and emergency preparedness upgrades have been made to enhance our spent fuel pool capabilities following the events at Fukushima, Japan in 2011.

adequate protection of the public health and safety and the environment," and there is "no pressing safety or security reason to mandate earlier transfer of fuel from pool to cask."[5]

SNF Disposal Is the Government's Obligation under Existing Law and Contracts

Although the nuclear energy industry has demonstrated that SNF can be safely stored in spent fuel pools or dry casks, the federal government and the general public should not view these temporary measures as a de facto permanent solution to the SNF disposal issue. SNF disposal is both a statutory and contractual obligation of the federal government.

During the 1970s, when many of the existing nuclear plants were licensed and constructed, SNF was expected to be reprocessed off-site. In the United States, reprocessing of commercial SNF was performed in the late 1960s and early 1970s at West Valley, New York. Therefore, spent fuel pools were not designed to store all SNF generated during the life of the plant. However, concerns began to arise that nuclear fuel reprocessing could contribute to the proliferation of nuclear weapons material, and in 1976, President Ford expressed this concern in a presidential statement on nuclear policy, concluding that "that the United States and other nations can and should increase their use of nuclear power for peaceful purposes even if reprocessing and recycling of plutonium are found to be unacceptable" but that the "reprocessing and recycling [of SNF] should not proceed unless there is sound reason to conclude that the world community can effectively overcome the associated risks of proliferation."[6] President Ford further stated that "the United States should no longer regard reprocessing of used nuclear fuel to produce plutonium as a necessary and inevitable step in the nuclear fuel cycle . . . ."[7] In 1977, President Carter's veto of the Department of Energy Authorization Act of 1978 – Civilian

[5] *See* Spent Fuel Storage in Pools and Dry Casks Key Points and Questions & Answers, U.S. Nuclear Regulatory Comm'n, http://www.nrc.gov/waste/spent-fuel-storage/faqs.html (last updated Apr. 13, 2015).

[6] Gerald R. Ford Presidential Documents, vol. 12, no. 44, at 1626–27 (1976).

[7] *Id.*

Applications effectively halted commercial reprocessing in the United States, making storage the only option for SNF.

As a result of the rising inventory of SNF that domestic nuclear electrical utilities were being required to store, Congress passed and President Reagan signed the NWPA, which reaffirmed federal responsibility "to provide for the permanent disposal of high-level radioactive waste and such [SNF] as may be disposed of in order to protect the public health and safety and the environment."[8] To achieve this goal, the NWPA directed the Secretary of Energy to find an appropriate repository site and, following Presidential and Congressional approval of that selection, proceed with construction authorization through the NRC. In 1987, the NWPA was amended to establish Yucca Mountain in Nevada as the sole candidate site for a permanent geologic repository.[9]

The NWPA also directed the Secretary to promulgate and enter into contracts with the nation's nuclear utilities for the acceptance, transportation and disposal of SNF. As a result, DOE promulgated the Standard Contract for Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste, the terms of which are presented at 10 C.F.R. § 961.11. The Standard Contract provides, among other things, that in return for the payment of fees into the NWF, the government, beginning not later than January 31, 1998, would begin accepting and take title to SNF from each of the nation's domestic nuclear electrical utilities for permanent storage at the to-be-constructed federal SNF repository at Yucca Mountain. The Standard Contract also requires that DOE provide the equipment, procedures, and transportation casks necessary to transfer title of the utilities' SNF to the federal government. Entry into the Standard Contract was

[8] 42 U.S.C. § 10131(a)(4).

[9] *See* Omnibus Budget Reconciliation Act of 1987, Pub. L. No. 100-203, 101 Stat. 1330 (codified at 42 U.S.C. § 10172).

effectively mandatory. In fact, the federal government has made the Standard Contract with DOE a prerequisite for the issuance or renewal of nuclear power plant licenses.

DOE's Breach of Contract

Alabama Power and Georgia Power signed the Standard Contract for each of our currently operating plants in 1983. In the late 1990's, Plants Hatch and Vogtle added spent fuel storage racks to their spent fuel pools to expand storage capacity. Plant Farley, which has separate spent fuel pools for each unit, has usable spent fuel storage capacity of over 1,300 assemblies for each unit. Plant Hatch, where both units share a single pool, has usable storage capacity of over 5,900 assemblies. Plant Vogtle Units 1 and 2, which also share a spent fuel pool, has usable spent fuel storage capacity of over 3,400 assemblies.

On the basis of the Standard Contract, Alabama Power and Georgia Power[10] have paid over $1.2 billion into the NWF for the nuclear energy produced to date at Plants Farley, Hatch, and Vogtle. The federal government, however, has yet to build the permanent SNF repository that is required by the NWPA and the Standard Contract. Because of this failure, DOE did not begin accepting SNF from the nation's domestic nuclear electrical utilities by the January 31, 1998 deadline. As a result, nuclear utilities filed breach of contract actions against the federal government in the United States Court of Federal Claims. As existing law continues to require a repository, these actions are for partial breach of contract only, not total breach. Thus, as partial breach cases, the utilities are not recovering payments made into the NWF.[11] Instead, recoveries

[10] Although Alabama Power and Georgia Power own Plants Farley, Hatch, and Vogtle, Southern Nuclear is the operating agent and attorney-in-fact for Alabama Power and Georgia Power with regard to those nuclear facilities.

[11] *Ind. Mich. Power Co. v. United States*, 422 F.3d 1369, 1372–73 (Fed. Cir. 2005) (finding DOE liable for breach of contract); *Me. Yankee Power Co. v. United States*, 225 F.3d 1336, 1342 (Fed. Cir. 2000), *aff'g Yankee Atomic Elec. Co. v. United States*, 42 Fed. Cl. 223 (1998) (DOE's failure to begin performance by January 31, 1998 was a partial breach and "[t]he breach involved all the utilities that had signed the contract—the entire nuclear electric industry.").

to date have been limited to the costs that utilities have incurred in connection with construction, operation, and maintenance of their dry storage facilities, provided that the utility bringing the claim would not have needed those dry storage facilities if the government had begun accepting SNF for storage by January 31, 1998. Table 2 summarizes the recoveries to date by Southern Company entities in their breach of contract claims.

Table 2. Recoveries by Southern Company Entities for SNF Breach of Contract Claims

Lawsuit	Year Filed	Years of Breach	Judgments
1st Lawsuit	1998	1998-2004	Alabama Power: $17M Georgia Power: $56.7M
2nd Lawsuit	2008	2005-2010	Alabama Power: $25.5M Georgia Power: $36.5M
3rd Lawsuit	2015	2011-2014	Case Pending[12]

The longer DOE delays performance of the Standard Contract and fails to take custody of nuclear utilities' SNF, the greater the burden on those utilities. Facilities utilizing dry cask storage technology will have to be expanded. At our three sites, construction of independent spent fuel storage installations (ISFSIs) and continued procurement of hundreds of casks and canisters over a twenty five year (25) period will result in a total of approximately half a billion dollars (not adjusted for inflation) to be spent by Alabama Power and Georgia Power on new storage equipment and expanded facilities. Ultimately, until the issue is resolved or storage is provided, Alabama Power, Georgia Power, and the nation's other nuclear utilities will continue to incur damages as a result of the government's failure to perform its obligations under the NWPA and the Standard Contract.

[12] In this third lawsuit, Alabama Power and Georgia Power are seeking a combined $179 million. Discovery has just begun in that case, and trial is not expected until late 2016.

Recent Actions Support Yucca Mountain

Even as the industry faces continued challenges, there is increasing confidence that the nation's nuclear waste program is finally getting back on track, as supported by several recent developments.

First, the U.S. Court of Appeals for the D.C. Circuit recently ordered the NRC to comply with the NWPA and to use available funds to resume consideration of DOE's Yucca Mountain license application.[13] NRC is complying with this court order.

Second, in a separate decision arising from a lawsuit filed by NEI and the National Association of Regulatory Utility Commissioners, the D.C. Circuit recognized DOE's deficient approach to addressing SNF and ordered DOE to cease collecting the annual fee of 1.0 mil (one-tenth of a cent) per kilowatt-hour of nuclear-generated electricity, which was established pursuant to the NWPA.[14] DOE set the fee to zero effective May 16, 2014. A fee cannot be reinstated until DOE can demonstrate the appropriate rate commensurate with DOE's activities toward a permanent waste removal and disposal solution.

Third, in August 2014, the NRC issued the Continued Storage Rule (CSR), which replaced the Waste Confidence Decision that had previously been remanded by the courts, and allowed the NRC to resume licensing decisions. The CSR and accompanying Generic Environmental Impact Statement set forth the "environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor..."[15] As explained by the

[13] *See In re Aiken Cnty.*, 725 F. 3d 255 (D.C. Cir. 2013).

[14] *See Nat'l Ass'n of Regulatory Utility Comm'rs v. U.S. Dep't of Energy*, 736 F.3d 517 (D.C. Cir. 2013).

[15] Continued Storage of Spent Nuclear Fuel, 79 Fed. Reg. 56238, 56249 (Sept. 19, 2014).

Congressional Research Service: "In approving the storage rule, NRC ended its suspension of final licensing decisions for new reactors, spent fuel storage facilities, and license renewals."[16]

Fourth, after an extensive scientific and technical review and federal expenditures exceeding $15 billion, NRC staff recently issued the remaining volumes of the Safety Evaluation Report (SER) and concluded that Yucca Mountain is a safe location for disposing nuclear waste for at least one million years. To obtain final approval of Yucca Mountain, DOE must still acquire certain land and water rights, supplement an environmental report, and complete the NRC licensing/adjudicatory process, but the scientific analysis was clear: Yucca Mountain is a safe location for a permanent waste repository.

Finally, we are encouraged by the NRC's recent decision to use available funds to complete the supplemental environmental impact statement for the Yucca repository, although additional funding will also be needed to allow the NRC to complete the licensing process. In that regard, it is noteworthy that the House of Representatives Energy and Water Appropriations Bill for FY2016 (H.R. 2028), which was approved by the full House of Representatives on May 1, 2015, would provide $150 million for further progress on the Yucca license.

Costs of Inaction

While there is good reason for optimism, we also recognize that sustaining progress on the Yucca repository has been elusive. Failing to move forward with the permanent repository at Yucca Mountain would have several adverse impacts.

First, continued inaction on Yucca Mountain would prolong regulatory uncertainty for the nuclear industry. Our industry has seen firsthand how issues related to SNF can seriously complicate, or even prevent, licensing and operation of power plants. This was clearly seen in the

[16] Mark Holt, Cong. Research Serv., RL 33558, Nuclear Energy Policy 3 (2014), *available at* https://www.fas.org/sgp/crs/misc/RL33558.pdf

period of time between the court order remanding the Waste Confidence Decision in June 2012 and the NRC's issuance of the Continued Storage Rule in August 2014, when a virtual moratorium on new licensing decisions was in effect. Increased uncertainty about the future of SNF also risks impacting decisions to invest in new nuclear capacity, which is a source of clean, safe, and reliable energy.

Second, continued inaction unfairly creates concern on the part of the public about nuclear power. We are able to safely handle SNF, but the failure of the federal government to move it, using the funds already paid by customers, to a permanent repository could have a detrimental impact on public support for nuclear power at a time when nuclear energy is absolutely critical to meeting the nation's economic, energy, and environmental needs. This is regrettable because the overwhelming scientific evidence demonstrates that SNF can be safely stored on-site until it is moved to Yucca Mountain, where it can be safely placed for at least one million years. But temporary solutions by the industry are not the kind of permanent solutions needed nor are they the solutions required by the NWPA.

Third, inaction on Yucca Mountain means the nuclear power plants themselves must continue to manage, secure, and oversee SNF storage systems (whether spent fuel pools or dry casks), which takes up valuable space at power plants, causes operators to spend more on site security and storage facilities and drives up costs for operating nuclear reactors, as discussed in more detail earlier in this testimony.

Fourth, inaction on Yucca Mountain will impose increased costs on our customers, the federal government, and taxpayers. Nationwide, electricity customers have paid approximately $750 million annually in nuclear waste fees for these purposes, pushing the current balance of

the NWF to more than $30 billion (with accrued interest).[17] Alabama Power has paid over $399 million into the NWF for Plant Farley. Georgia Power (and its co-owners) has paid over $400 million into the NWF for Plant Hatch and approximately $445 million for Plant Vogtle (Units 1 & 2). Congress should not lose sight of the fact that these payments are made with funds collected from electricity customers—families and businesses throughout Alabama and Georgia. It is in the best interests of the nation, federal taxpayers, electricity customers, the general public, and the electric utilities to have all of the approximately 70,000 metric tons of nuclear waste—currently stored at nuclear facilities across 33 states—properly and safely disposed of in a permanent repository as required by the NWPA. The Government Accountability Office has estimated that, in total, the federal government's liability for breach of the SNF contracts will exceed $21 billion by 2071.[18] These liability payments come out of the Judgment Fund, not from the NWF. Already, DOE payments (including those for SNF breach of contract claims) are reported to be the largest category of payments from the Judgment Fund in recent years.[19]

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[17] Nuclear waste fund payments, in total and state-by-state, are available on the Nuclear Energy Institute's website. *See* Nuclear Energy Institute, US State by State Used Fuel and Payments to the Nuclear Waste Fund, http://www.nei.org/Knowledge-Center/Nuclear-Statistics/On-Site-Storage-of-Nuclear-Waste/US-State-by-State-Used-Fuel-and-Payments-to-the-Nu (last updated Apr. 2015). According to a recent audit report by the U.S. Department of Energy Inspector General, the "U.S. Treasury securities held by the [Energy] Department related to the NWF had a market value of $39.8 billion..." U.S. Dep't of Energy, Office of Inspector General, Dep't of Energy Nuclear Waste Fund's Fiscal Year 2014 Financial Statement Audit 2 (Nov. 2014), *available at* http://energy.gov/sites/prod/files/2014/12/f19/OAS-FS-15-03.pdf

[18] *See* U.S. Gov't Accountability Office, GAO-15-141, Spent Nuclear Fuel Management: Outreach Needed to Help Gain Public Acceptance for Federal Activities That Address Liability 16 (2014).

[19] *See* National Law Journal, Judgment Fund: Energy Department Pays Out the Most — Again (Apr. 6, 2015), *available at* http://www.nationallawjournal.com/id=1202722657674/Judgment-Fund-Energy-Department-Pays-Out-the-Most-mdash-Again#ixzz3ZqvxlWYr.

General Observations

As this Subcommittee considers a range of nuclear waste policy issues, I would like to offer several additional observations for the Subcommittee's consideration. These are listed below in no particular order of significance.

- **Interim Storage**: As a general matter, we support a long-term centralized storage solution. We believe it would be appropriate to site such a facility at Yucca Mountain, either as part of the initial repository license or in a separate facility. We are not opposed to additional storage sites. We look forward to reviewing in detail recent proposals for private storage sites in Texas and New Mexico. We continue to support the principle—embodied in the existing NWPA—that the NWF may be used to fund interim storage sites only after a permanent repository is licensed.

- **Nuclear Waste Fees**: We would support restoring collection of the Nuclear Waste Fee only after the federal government comes into compliance with the NWPA. We believe Congress should dedicate nuclear waste fee dollars to the sole purpose of removal and disposal of SNF.

- **Spent Fuel Contracts**: We are concerned about proposals that would require DOE to remove SNF from decommissioned plants before operating plants or otherwise alter the current contractually established priority system. DOE should honor the current SNF queue and contractual provisions. To the extent changes in the SNF acceptance priorities are necessary, existing law and contracts already allow exchanges among SNF contract holders. These exchanges can be used to facilitate removal of SNF at decommissioned plants earlier than currently contemplated. Further, DOE could support exchanges to ensure that space in the SNF queue is efficiently utilized to remove SNF from decommissioned plants or to avoid costs associated with the need to build additional storage facilities at operating reactors.

- **State Incentives**: We would support reasonable incentives for the State of Nevada to help facilitate completion of Yucca Mountain and to compensate the state for costs it incurs on the basis of hosting this site. This is not a new position for our company. In 2006, one of my predecessors at Southern Nuclear, Barnie Beasley, testified before Congress about SNF issues, stating: "The nuclear energy industry supports an active and constructive role for Nevada in the development of Yucca Mountain to help ensure the safety of its citizens. The industry also supports compensation for the State to account for the program's socioeconomic

impact, as called for in the Nuclear Waste Policy Act. This model is consistent with the siting and operation of the Waste Isolation Pilot Plant."[20]

- **Blue Ribbon Commission**: We appreciate the work of the Blue Ribbon Commission on America's Nuclear Future and find several of their proposals to be worthy of further consideration. For example, we support the creation of a new federal corporation with responsibility for SNF storage and disposal. We also agree that this new corporation should have access to the NWF without the need for further congressional appropriations, although subject to ongoing congressional oversight and in a manner consistent with the existing NWPA. Creation of this new entity should be linked with reform of SNF funding to ensure access to the Nuclear Waste Fund for appropriate uses. Finally, it is critical that any new siting process be science-based and transparent. A lack of consent by a local host site should not override the technical suitability of a site.

Conclusion

As our nation moves ahead with the construction of new nuclear power plants, we must remain mindful of the federal government's long-standing obligation, as expressed in the NWPA, to safely and permanently dispose of the nation's SNF inventory. We believe the Yucca Mountain repository program should continue to be pursued. The nation has come too far and invested too much to abandon it now, particularly in light of the recent NRC safety reports demonstrating that it is a safe location for these purposes. Electricity customers around the country have, for several decades, paid billions of dollars in nuclear waste fees, but the government has yet to live up to its end of the bargain (or its obligation under the law).

I applaud this Subcommittee for taking a keen interest in tackling this complex and challenging problem. The good news is that it is not an insurmountable issue; indeed, from a technical, safety, financial, and legal perspective, the path forward is very manageable and

[20] Testimony of J. Barnie Beasley, Jr., President of Southern Nuclear Operating Company, before the Senate Energy and Natural Resources Committee (Aug. 3, 2006). Additionally, we are generally opposed to proposals to de-link permanent disposal of civilian and defense-related nuclear waste, as recently suggested by the Administration. We support the Reagan Administration's 1985 decision to establish a permanent repository for both civilian and defense nuclear waste. We would encourage this Subcommittee to fully vet any such proposals to ensure that it advances the objective of establishing an operational permanent repository for civilian nuclear waste and brings the country into compliance with the existing spent fuel contracts and the NWPA.

understood. In many respects, the key challenges are political and in the domain of Congress to address. Thank you for allowing me to appear before this Subcommittee today. I will be glad to answer any questions you might have.

Mr. SHIMKUS. Thank you.

Next I would like to recognize Mr. Geoffrey Fettus, Senior Attorney from the Natural Resources Defense Council.

You are recognized for 5 minutes, and welcome.

STATEMENT OF GEOFFREY H. FETTUS

Mr. FETTUS. Thank you, Chairman Shimkus and Ranking Member Tonko, and distinguished members of the subcommittee for having me today and allowing me to provide the Natural Resources Defense Council's views on this matter.

Let me get right to two key issues at hand, the proposed Yucca Mountain repository and interim storage away from reactor sites. We are concerned Congress is on a trajectory to make two misguided decisions that run directly counter to the bipartisan set of recommendations found in President Obama's Blue Ribbon Commission for America's Nuclear Future.

First, with respect to Yucca—and I will note that Nevada is not here—it is clear some members believe the proposed Yucca site is a safe place to bury spent nuclear fuel and that the project can be revived now that Senator Reid is retiring. Reasonable people can disagree. Respectfully, those ideas are not accurate. Efforts to restart the failed process face an uphill climb of massive technical and institutional challenges, years of litigation, and a complete lack of meaningful State consent. Simply, Yucca Mountain leaks profusely. Licensing depends on, at this point, a fictional set of drip shields. And the State is joined across party lines to litigate the matter for as long as it takes.

This is on top of the history where, in an effort to preserve what turned out to be an unworkable site, in the mid-1980s, the Energy Department, they abandoned its technical siting guidelines used to select Yucca. In the early 2000s, EPA gerrymandered the site boundaries in an effort to ensure that radiation doses at the edge of the regulated area miles away would be acceptable. And then DOE proposed that hundreds of years into the future, the agency would spend billions more to introduce titanium drip shields to prevent the early corrosion of the waste containers.

Along the way, Congress worked on the site selection process by simply selecting Yucca and then demanding EPA's regulations be consistent with the views of the National Academy of Sciences. This effort subsequently backfired when a bipartisan panel of the D.C. Circuit unanimously found that EPA's rule was not, in fact, consistent with the views of the National Academy of Sciences.

Restarting the Yucca fight, respectfully, Mr. Chairman, is not the way to go nor is the right way to proceed with the current flurry of premature interim storage plants. Here Congress could be poised to delink interim storage of spent fuel from the requirement to first establish an acceptable final geologic site. Wise leaders with a history of reaching across the aisle, like Jeff Bingaman of New Mexico, who was the first and last to introduce potentially workable legislation consistent with the BRC recommendations warned against such tactics for decades. The American public and each of the States—and I think this is where we all agree—not just the industry that has the special deal of the Federal Government assuming its waste burden, has the right to expect a permanent, thought-

ful solution to our nuclear waste dilemma. Simply expediting an interim storage site for Texas or for New Mexico or some other yet-to-be-named State, without doing the work of crafting a comprehensive bill that can finally get the repository program off the Yucca treadmill and back on track will most likely lead to double the transportation risks, even more extended above-ground storage of highly radioactive waste with no permanent disposal and deeply misguided efforts to shift that waste to Yucca or WIPP when the political stars, not the scientific stars, align. This approach passes the risk to future generations and is destined to arrive in the same quagmire we are sitting in now. It simply doesn't solve the problem.

Instead of proceeding in this fashion, in my written statement I have outlined an approach that NRDC believes is workable and can regain the widespread public and, most important, State support necessary. The elements of this approach are: One, recognized that repositories must remain the focus of any legislative effort; two, create a coherent legislative framework—and this is most important—before commencing any geologic repository or interim storage site development processes; three, arrive at a consent-based approach for nuclear waste storage via a fundamental change in law; four, address the storage or interim storage in a phased approach consistent with the careful architecture of former Senator Bingaman's S. 3469, which was introduced in 2012; and, five, exclude delaying, proliferation, driving, and polarizing closed fuel cycle and processing options from this effort.

This is one area where we certainly agree hopefully with every member of the subcommittee. The history of the Federal nuclear waste program has been dismal, but decades from now, others will face the precise predicament we find ourselves in today unless Congress revamps how nuclear waste is regulated and allows for meaningful State oversight. Otherwise, we are doomed to repeat this cycle until a future Congress gets it right.

Thank you again for this opportunity, and I am happy to answer any questions.

[The prepared statement of Mr. Fettus follows:]

Statement of

Geoffrey H. Fettus
Senior Attorney
Natural Resources Defense Council, Inc.

"Update on the Current Status of Nuclear Waste Management Policy."

Before the

Congress of the United States
House of Representatives
Committee on Energy and Commerce
Subcommittee on Environment and the Economy
2125 Rayburn House Office Building

May 15, 2015

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Introduction

Mr. Chairman and members of the Subcommittee, thank you for providing the Natural Resources Defense Council, Inc. (NRDC) this opportunity to present our views at this hearing to update the current state of nuclear waste management policy.

NRDC is a national, non-profit organization of scientists, lawyers, and environmental specialists, dedicated to protecting public health and the environment. Founded in 1970, NRDC serves more than one million members, supporters and environmental activists with offices in New York, Washington, Los Angeles, San Francisco, Chicago, Bozeman, Montana, and Beijing. We have worked on nuclear waste issues since our founding, and we will continue to do so.

After nearly 50 years of effort, the federal nuclear waste program in this country has failed to deliver a final resting place for highly toxic, radioactive waste that will be dangerous for millennia. Over the years, there have been numerous efforts to attribute the failure of the repository program to certain Senators, to Nevada Governors of both parties, to U.S. Nuclear Regulatory Commission (NRC) Commissioners, and even to the public for failure to accept its part in disposing of nuclear waste. All of this is wrong. Failure cannot be laid at the feet of any one person or entity or the public. Rather, the reasons are multiple and some are detailed in the Final Report of President Obama's Blue Ribbon Commission for America's Nuclear Future (BRC).[1]

In brief, several agencies (including the U.S. Environmental Protection Agency (EPA), the U.S. Department of Energy (DOE), the NRC, and the U.S. Department of Justice (DOJ)) and Congress repeatedly distorted the process for developing licensing criteria for a proposed repository. In each instance, detailed later in this testimony, such action was done so as to weaken environmental standards rather than strengthen them, and always to ensure the site would be licensed, no matter the end result. Rather than learn from this past, we fear Congress could now plow ahead with revanchist attempts wasting millions of dollars to reopen the now-defunct Yucca project, or create an interim spent nuclear fuel storage facility, policies that ensure failure. The BRC

[1] President Obama's "*Blue Ribbon Commission on America's Nuclear Future - Report to the Secretary of Energy, January 31, 2012*" (hereafter "*BRC Report*" or "*Final Report*").

recommendations, though only partially adequate to the task, point a way forward with adherence to: the need for geologic repositories; a science driven process for setting standards; and, most importantly, a focus on consent-based agreements between federal and state partners.

In NRDC's view, it is the partnership between federal and state partners that is key to arriving at state consent to host any amount of permanent nuclear waste disposal. To avoid continuing the contentious stalemate over nuclear waste management, we will conclude our testimony by offering five recommendations for how to finally move forward and get out of the present malaise.

Nuclear Waste Status Update

The Barriers to Restarting the Failed Yucca Mountain Process

As a first matter of business, we are aware that the Nuclear Waste Policy Act (NWPA) remains the law governing the disposition of spent nuclear fuel and high-level radioactive waste in the United States and, currently, the NWPA directs that Yucca Mountain be the sole repository for commercial spent nuclear fuel and defense high-level radioactive waste. But the record created by this hearing should fully reflect the story of how multiple actions by EPA, DOE, NRC, DOJ, and the U.S. House and Senate corrupted the process for developing and implementing licensing criteria for the Yucca Mountain repository and ensured the process was unworkable from a technical and institutional perspective. Failure to understand this history dooms any new effort to move forward on nuclear waste.

The Failure of the Repository Program

The history of the nuclear waste repository program is replete with failures and any suggestion that the failed Yucca project can be quickly and easily restarted and brought to a successful conclusion should be dispensed with as folly.

1. The first failed efforts.

In 1957-1958, the U.S. Atomic Energy Commission (AEC) conducted the first site specific study of the disposal of high-level radioactive waste in geologic salt formations at Hutchinson, Kansas. Between 1961 and 1963, the AEC conducted experiments at the Carey salt mine at Lyons, Kansas. In 1970 the AEC, along with the Kansas governor, announced tentative selection of the Carey salt

mine for a demonstration high-level waste repository. Opposition, primarily by the Kansas Geological Survey, concerns over conditions in the mine, the presence of numerous oil and gas wells in the vicinity, and the fact that there was solution mining at an operating adjacent salt mine operated by American Salt Company forced the AEC to abandoned the site by 1972.

Following the demise of the Lyons repository effort, the AEC announced in 1972 that it intended to develop a 100-year Retrievable Surface Storage Facility (RSSF). This proposal was opposed by the EPA and others because in their view it would divert attention and resources from efforts to find a permanent means of geologic disposal. As a consequence of this opposition, the Energy Research and Development Agency (ERDA) gave up its plans for a RSSF in 1975. Between 1975 and 1982, ERDA and the DOE continued to search for potential repository sites in various rock types in the states of Michigan, Ohio, New York, Utah, Texas, Louisiana, Mississippi, Washington, and Nevada. Various degrees of resistance from state and local representatives, combined with geological and technical problems, stalled these efforts to find a repository site. In 1976 President Gerald Ford halted the reprocessing of commercial nuclear fuel. In the following year President Jimmy Carter reinforced the government's ban on commercial reprocessing, and tried to halt the development of commercial breeder reactor development. These actions reinforced the need for prompt development of a geologic repository. While in 1977 ERDA also announced that it would accept custody of commercial spent fuel and store it at Away From Reactor (AFR) storage facilities, this never happened.

2. The IRG Process

By the mid-1970s it had become clear that commercial spent fuel reprocessing was uneconomical, environmentally unsound, and represented a serious proliferation risk. President Gerald Ford refused to subsidize the completion of the Barnwell reprocessing plant, and then President Jimmy Carter pulled the plug on reprocessing. These actions by Presidents Ford and Carter gave a new urgency to finding a site suitable for geologic disposal of both spent fuel and high-level radioactive waste. In the late 1970s President Carter initiated an Interagency Review Group (IRG) process to try to solve once and for all the nuclear waste problem in the United States. The IRG process involved numerous scientists, extensive public involvement, and a consultation and concurrence role for the states. The outcome of the IRG effort was a two-track program. The DOE was tasked

with the responsibility for identifying the best repository sites in the country, and the EPA and the NRC were tasked with developing nuclear waste disposal criteria against which the selection and development of the final repository sites would be judged.

3. The Nuclear Waste Policy Act (NWPA)

In 1982, Congress enacted the NWPA, which embodied in law the principal recommendations that grew out of the IRG process, including a commitment to geologic disposal, two repositories, and characterization of three sites before final selection of the first repository. The NWPA established a comprehensive program for the disposal of spent nuclear fuel and high-level radioactive waste (HLW) from the nation's commercial reactors and nuclear weapons complex. At the time the NWPA was passed nearly 25 years ago, the site selection and development process proposed by the IRG enjoyed fairly widespread support from within the Congress, the environmental community and state governments. By contrast, at this time the U.S. Government has little, if any, support from the State of Nevada, and virtually no public support from the environment and public health community for the proposed Yucca Mountain project.

4. What else went wrong?

Over the last twenty years, a substantial segment of the environmental community has arrived at the judgment that the process of developing, licensing, and setting environmental and oversight standards for the proposed repository has been, and continues to be, rigged or dramatically weakened to ensure that the site can be licensed, rather than provide for safety over the length of time that the waste remains dangerous to public health and the environment. How the Yucca Mountain site was selected and how the environmental standards were set are examples that illustrate this perspective.

a. Site Selection

First, DOE and then the Congress corrupted the site selection process within the NWPA. The original strategy contemplated DOE choosing the best four or five geologic media, then selecting a best candidate site in each media alternative, then narrowing the choices to the best three alternatives, and finally picking a preferred site for the first of two repositories. However site selection guidelines were strongly criticized as DOE was accused of selecting sites that they had

previously planned to pick. In May of 1986 DOE announced that it was abandoning a search for a second repository, and it had narrowed the candidate sites from nine to three, leaving in the mix the Hanford Reservation in Washington (in basalt), Deaf Smith Co., Texas (in bedded salt), and Yucca Mountain in Nevada (in unsaturated volcanic tuff). All equity in the site selection process was lost in 1987, when the Congress, confronted with a potentially huge cost of characterizing three sites, amended the NWPA of 1982, directing DOE to abandon the two-repository strategy and to develop only the Yucca Mountain site. At the time, Yucca Mountain was DOE's preferred site. The abandonment of the NWPA site selection process led directly to the loss of support from the State of Nevada, diminished Congressional support (except to ensure that the proposed Yucca site remains the sole site), and less meaningful public support for the Yucca Mountain project. The situation has only deteriorated since that time.

b. Radiation Standards

Radiation standards, the second track of the NWPA process has, if possible, fared worse. Section 121 of the NWPA of 1982 directs EPA to establish generally applicable standards to protect the general environment from offsite releases from radioactive materials in repositories, and directs the NRC to issue technical requirements and criteria. Unfortunately, it has been clear for years that the projected failures of the geologic isolation at Yucca Mountain are the determining factor in EPA's standards. EPA repeatedly issued standards that are concerned more with licensing the site than establishing protective standards. EPA's original 1985 standards were vacated in part because the EPA had failed to fulfill its separate duty under the Safe Drinking Water Act, 42 U.S.C. §300h, to assure that underground sources of water will not be "endangered" by any underground injection. *Natural Resources Defense Council v. Environmental Protection Agency* (NRDC v. EPA), 824 F.2d 1258 (1st Cir. 1987).

EPA's second attempt to at setting standards that allow for a projected failure of geological isolation was again vacated, this time by the United States Court of Appeals for the D.C. Circuit. The D.C. Circuit found that EPA's Yucca Mountain rule (and the corresponding NRC standard), which ended its period required compliance with the terms of those rules at 10,000 years was not "based upon or consistent with" the recommendations of the National Academy of Sciences ("NAS") as required by the 1992 Energy Policy Act and therefore must be vacated. *Nuclear*

Energy Institute, Inc. v. EPA, 373 F.3d 1251 (2004). Giving significant deference to the agency, the D.C. Circuit did not vacate EPA's strangely configured compliance boundary for the Yucca Mountain site. See this map of EPA's compliance boundary, https://www.nrdc.org/media/docs/020506b.pdf, (inside the oddly drawn line, the repository need not protect water quality and radiation can leak in any amount). The dramatically irregular line that represents the point of compliance has little precedent in the realm of environmental protection, and its shape is perhaps more reminiscent of gerrymandered political districts. Rather than promulgate protective groundwater standards, EPA pieced together a "controlled area" that both anticipates and allows for a plume of radioactive contamination that will spread several miles from the repository toward existing farming communities that depend solely on groundwater and perhaps through future communities closer to the site.

EPA's next proposed and revised rule, issued in 2005, retained the 15 millirem/year and groundwater standards for the first 10,000 years, but then establishes a 350 millirem/year standard for the period after 10,000 years and does away with the groundwater standard entirely. This two-tiered standard failed to comply with the law and fails to protect public health, especially if the repository's engineered barriers were compromised earlier than DOE predicts. On October 15, 2008, EPA published the final version of its revised Yucca Mountain rule in the Federal Register ("2008 Yucca Mountain rule," 73 Fed. Reg. 61255-61289). The 2008 Yucca Mountain rule's two-tiered individual protection annual dose standard establishes an initial 15 millirem first-tier limit, but weakens that limit to 100 millirem in the period after 10,000 years, when EPA projects peak dose to occur. Again, peak dose could occur significantly earlier if engineered barriers fail earlier than DOE and EPA have projected.

In any event, the final status of EPA's most recent two-tiered rule remains fundamentally uncertain. In an action pending in the District of Columbia Circuit (*State of Nevada v. Environmental Protection Agency*, No. 08-1327, consolidated with No. 08-1345), Nevada has challenged EPA's 2008 Yucca Mountain rule as once again failing to honor EPA's statutory duty to protect public health and safety, and to proceed consistently with the National Academy of Science's recommendations.

The Current Status of Nuclear Waste Management & Disposal

Despite lots of press about the NRC staff's issuance of the latest volume of its Safety Evaluation Report (SER) and its favorable conclusion that the Yucca Mountain repository could proceed to a licensing hearing (not that it would necessarily license the repository, as that would be making a mockery of its hearing process), there are dozens of issues likely to be litigated at great length. One in particular is premised entirely on DOE's design for titanium drip shields that are supposed to sit over each of the thousands of waste canisters in Yucca Mountain's underground tunnels to keep out corroding water. Although DOE included the drip shields as part of the repository design, and NRC has accepted them for license-review purposes, there is no plan to design, license, pay for, and much less install the shields until at least 100 years after the waste goes in. This unacceptable state of affairs is detailed by former NRC Commissioner Victor Gilinsky at http://thebulletin.org/yucca-mountain-redux7800. Quite simply, Yucca's likely repository configuration doesn't come close to meeting NRC requirements.

This and other issues are anticipated to be vigorously litigated by the State of Nevada, which has filed more than 200 contentions challenging DOE's license application for Yucca Mountain. To put the hearing process in perspective, NRDC is now entering the fifth year of a NRC licensing proceeding where not one party – not industry seeking the license, not NRC Staff, nor the environmental intervenors – have had any interest or taken any steps to functionally prolong or delay the proceeding beyond the rare extension of a short period of time for filing a pleading (something all parties found appropriate and necessary at various points).[2] And in the more than four years of this proceeding, *only three contentions* have been litigated on their merits, not the more than 200 likely to be litigated for the Yucca license if the process were commenced. Any suggestion the Yucca licensing proceeding could easily restart and quickly move to a successful conclusion for permanent disposal is simply a fallacy. And when that inevitable litigation rightly waylays yet another effort at nuclear waste disposal, the damage to the nation's prospects to ever developing a repository may be permanent.

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[2] *In the Matter of Strata Energy, Inc.*, (Ross In Situ Recovery Uranium Project), Docket No. 40-9091-MLA, ASLBP No. 12-915-01-MLA.

Also ahead is the looming debate over consolidated storage. Just to focus on one of the potential sites, the Waste Control Specialists (WCS) corporation has announced that it will seek to establish "interim" storage site for the nation's commercial spent nuclear fuel at its existing "low-level" radioactive and hazardous waste site in Andrews County, Texas, just across the border from New Mexico's defense waste transuranic repository, the Waste Isolation Pilot Plant (WIPP) and even closer to Urenco's uranium enrichment plant, officially in Eunice, NM. As we understand it, WCS will submit a license application to the NRC sometime in the next two years. In essence, the WCS proposal is to site a dry storage facility containing transport casks (that have also not been licensed yet) containing high-level radioactive waste from reactors across the country. WCS suggests this "interim" site would exist for 60 years, after which the waste could then be moved again to some permanent repository that not only doesn't yet exist, but there isn't even a plan to get there.

There are several problems with this proposal. First, and most obviously from NRDC's perspective, immediately going forward with a consolidated storage proposal before working out the details of a comprehensive legislative path for nuclear waste storage and disposal (and connecting the licensing of storage to the licensing of a permanent repository) entirely severs the link between storage and disposal, and creates an overwhelming risk that a storage site will function as de facto final resting place for nuclear waste. Or, in the alternative and also just as damning, it sets up yet another attempt to ship the waste to Yucca Mountain or even open up New Mexico's WIPP facility for spent nuclear fuel disposal– a site designed and intended for nuclear waste with trace levels of plutonium, not spent fuel (that has already blown plutonium throughout the underground and into the environment, contaminating 22 workers, and is functionally inoperable for years).[3] All of this runs precisely counter to the BRC's admonition that "consent" come first – a potentially ironic turn after decades of promises were delivered to New Mexico that it would never be asked to turn WIPP into a commercial nuclear waste repository.

[3] On February 5, 2014 there was an underground fire at the WIPP facility, precipitating the evacuation of 86 workers underground at the time of the fire, with 13 workers treated for smoke inhalation (seven at the WIPP site and six at the Carlsbad Medical Center). Next, on the night of Friday, February 14, 2014 there was a significant release of radiation to the environment from the facility that has substantially contaminated the underground and affected the health of a number of WIPP employees. *See*, February 5, 2014, Fire - http://www.wipp.energy.gov/Special/AIB%20Report.pdf; *see also*, February 14, 2014 Radiological Release (Phase 1), -http://www.wipp.energy.gov/Special/AIB_Final_WIPP_Rad_Release_Phase1_04_22_2014.pdf.

And that's the beginning of the problems of moving forward with consolidated storage before Congress sets out a comprehensive plan. Others are more practical in nature. In contrast to the defunct Private Fuel Storage (PFS) site proposed in Utah, which actually obtained a NRC license even though nearly every single major Republican office-holder in the state objected to it, the WCS proposal isn't designed as a private site where WCS would negotiate with each nuclear utility to accept its waste. The PFS scheme failed in part because such a private site transfers no liability for the nuclear waste, thus no utility was interested in the retention of the liability– especially as the waste would have to be transported hundreds or thousands of miles. In this instance, as we understand it, WCS will be requesting DOE accept title to the waste and all liability for transportation to Andrews County, Texas. And while WCS states that Andrews County supports the idea, it's not at all clear over the long term whether consensus will include more than the statement of a local governing body. Indeed, Texas and New Mexico will both need to be involved and already there are high-ranking objections from New Mexico. http://www.tomudall.senate.gov/?p=press_release&id=1947.

In contrast to all of this, NRDC suggests a better way forward that includes a pilot program for consolidated storage that does not include severing the link between storage and disposal. *See supra* at 14, 15.

The Trajectory of Senate Nuclear Waste Legislation

On September 12, 2012, NRDC testified before the Senate Energy & Natural Resources Committee on S. 3469, the template for S. 1240, and its current iteration, S. 854.[4] We commended S. 3469's adherence to three principles that, in our view, must be complied with if America is ever to develop an adequate, safe solution for nuclear waste – (1) radioactive waste from the nation's commercial nuclear power plants and nuclear weapons program must be buried in technically sound deep geologic repositories, in which the waste will be permanently isolated from the human

[4] NRDC's testimonies, delivered in 2012 and 2013 to the Senate E&NR Committee, can be found online at http://www.energy.senate.gov/public/index.cfm/hearings-and-business-meetings?Id=228fe2e8-8c9e-4440-b266-1d3885c3fa93&Statement_id=68c04fd7-ad48-4d91-b67f-e3c7c789471b; and http://www.nrdc.org/nuclear/gfettus-13073001.asp.

and natural environments; (2) governing legislation must contain a strong link between developing waste storage facilities and establishing final deep geologic repositories that ensures no "temporary" storage facility becomes a permanent one; and (3) nuclear waste legislation must embody the fundamental concept that the polluter pays the bill for the contamination that the polluter creates.

Unfortunately, the trajectory of legislation in the Senate has been negative, and we opposed last year's S. 1240 (and thus, this year's S. 854) because the bill: 1) severs the crucial link between storage and disposal; 2) places highest priority on establishing a Federal interim storage facility at the expense of getting the geologic repository program back on track; 3) fails to ensure that adequate geologic repository standards will be in place before the search for candidate geologic repositories sites commences; 4) fails to provide states with adequate regulatory authority over radiation-related health and safety issues associated with nuclear waste facilities in their respective states; and 5) fails to prohibit the Administrator (or Board) of a new federal entity overseeing nuclear waste management from using funds to engage in, or support spent fuel reprocessing (chemical or metallurgical).

In short, and regrettably, it appears that the authors of S. 1240/S. 854 have rejected several key recommendations of the BRC. Instead, the bill wrongly prioritizes the narrow aim of getting a government-run interim spent fuel storage facility up and running as soon as possible – a priority with potential financial benefits for business interests. However, as NRDC noted to the Senate in our testimony in 2013, we do believe the legislative process on nuclear waste management is salvageable, and we look forward to engaging in constructive efforts to address the shortcomings based on sound prescriptions.

NRDC's Prescriptions for Restarting and Forward Progress Towards Achieving Science-Based, Consent-Based Nuclear Waste Disposal Program

The BRC recognized that the 1987 amendments to the NWPA were "highly prescriptive" and "widely viewed as being driven too heavily by political consideration." As detailed earlier, we believe that those observations by the BRC are insufficiently critical assessments, however they make a sound point that goes directly to the fundamental flaw in the NWPA and the current

stalemate – at no point has Nevada consented to accept a potentially endless supply of nuclear waste and indeed, after the past two decades there is a vanishing likelihood the State, no matter the party in power, would ever would consent under any circumstances. So what to do?

NRDC recommends the Energy Committee consider five straightforward steps to re-launch the U.S. nuclear waste disposal program in a manner that finally, once and for all, puts the country on a path to solve the extraordinary challenge of waste that is toxic and radioactive for millennia.

Five Recommendations to Get the Nuclear Waste Program Back on Track

NRDC urges Congress to – (1) recognize that repositories must remain the focus of any legislative effort; (2) create a coherent legal framework before commencing any geologic repository or interim storage site development process; (3) arrive at a consent-based approach for nuclear waste storage and disposal via a fundamental change in law; (4) address storage in a phased approach consistent with the careful architecture of former Senator Bingaman's S. 3469 (introduced in 2012); and (5) exclude delaying, proliferation-driving and polarizing closed fuel cycle and reprocessing options from this effort to implement the interim storage and ultimate disposal missions.

Importantly, our view on each area is premised on a single overarching caution: in order to avoid repeating the mistakes of the last three decades, Congress must create a transparent, equitable process incorporating strong public health and environmental standards insulated from gerrymandering or other distortions in order to ensure, at the conclusion of the process, the licensing of a suitable site (or sites).

Recommendation 1 - Deep Geologic Repositories Are The Solution For Nuclear Waste And Must Remain the Focus

NRDC concurs with members of both parties in the recognition that our generation has ethical obligation to future generations regarding nuclear waste disposal. Adherence to the principle of deep geologic disposal as the solution to nuclear waste is consistent with more than 50 years of scientific consensus and the views of the BRC. No other solutions are technically, economically or morally viable over the long term, and NRDC strongly supports development of a science-based repository program that acknowledges the significant institutional challenges facing nuclear waste

storage and disposal. Thus, we urge an explicit adoption of the first purpose of the Nuclear Waste Policy Act (NWPA), 42 U.S.C. § 10131(b)(1), since the decision to isolate nuclear waste from the biosphere implicates critical issues of security, including: financial security, environmental protection, and public health.

Recommendation 2 – Create A Coherent Legal Framework That Ensures The "Polluter Pays" Before Commencing Any Repository Or Interim Storage Site Development.

To avoid repeating failures of past decades and consistent with BRC recommendations, both the standards for site screening and development criteria must be in final form before any sites are considered. Generic radiation and environmental protection standards must also be established prior to consideration of sites. Further, embedded in S. 3469 is the requirement that the polluters pay the bill for the contamination created. This bipartisan concept has long history as bedrock American law and must remain in full force in any legislation.

Recommendation 3 – Develop A Consent-Based Approach For Nuclear Waste Disposal Through A Fundamental Change In Law.

A central finding of the BRC was the need for a "consent-based, adaptive, and phased approach" for developing geologic disposal options. We agree with the general thrust, but any such "consent-based" process will enjoy a far higher probability of success in concert with a simple, but profound, change in the law. As the BRC's *Final Report* acknowledges, current federal law, including the Atomic Energy Act (AEA), preempts almost all forms of state regulation over a high level radioactive waste facility and, indeed, over regulation of radionuclides in general.

Congress should remove once and for all the AEA's exemptions for radionuclides from our nation's water and hazardous waste laws. These anachronistic nuclear exemptions from environmental law are at the heart of state and public distrust of both government and commercial nuclear facilities. Decades from now the Nation will return to the same predicament we face today (no matter how improved the architecture of any nuclear waste program) unless States are provided with meaningful regulatory authority under existing environmental laws. Therefore, Congress must amend the AEA to allow EPA and States direct authority over regulation, permitting, and operations of nuclear waste facilities.

As this Committee is aware, most federal environmental laws expressly exclude "source, special nuclear and byproduct material" from the scope of health, safety and environmental regulation by EPA or the states, leaving the field to DOE and NRC. In the absence of clear language in those statutes authorizing EPA (or states where appropriate) to regulate the environmental and public health impacts of radioactive waste, DOE thereby retains broad authority over its vast amounts of radioactive waste, with EPA and state regulators then only able to push for stringent cleanups on the margins of the process. Indeed, the BRC Report discusses the State of New Mexico's efforts to regulate aspects of the Waste Isolation Pilot Plant under RCRA as a critical, positive element in the development of the site. *Final Report* at 21.[5] The NRC also retains far reaching safety and environmental regulatory authority over commercial nuclear facilities, with agreement states able to assume NRC authority, but only on the federal agency's terms.

States are welcome to consult with the NRC and the DOE, but the agencies can, and will, assert preemptive authority where they see fit. This has happened time and again at both commercial and DOE nuclear facilities. This outdated regulatory scheme is the focal point of the distrust that has poisoned federal and state relationships involved in managing and disposing of high-level radioactive waste (HLW) and spent nuclear fuel, with resulting significant impacts on public health and the environment.

If EPA and the states had full legal authority and could treat radionuclides as they do other pollutants under environmental law, clear cleanup standards could be promulgated, and we could be much farther along in remediating the toxic legacy of the Cold War. Further, we could likely avoid some of the ongoing legal and regulatory disputes over operations at commercial nuclear facilities. Any regulatory change of this magnitude would have to be harmonized with appropriate NRC licensing jurisdiction over facilities and waste and harmonized with EPA's existing jurisdiction with respect to radiation standards: but such a process is certainly within the capacity of the current federal agencies and engaged stakeholders. Some states would assume regulatory jurisdiction over radioactive material, others might not. But in any event, substantially improved clarity in the regulatory

[5] The BRC Report omits discussion of the fierce effort New Mexico waged to obtain RCRA authority over the site.

structure and a meaningful state oversight role would allow, for the first time in this country, consent-based and transparent decisions to take place on the matter of developing storage sites and geologic repositories.

In short, removing the ability of the United States to unilaterally break the terms of the contract, as was suggested in the Bingaman legislation (S. 3469), could potentially give a state some measure of comfort that the agreement it had painstakingly negotiated will hold fast. But there would be nothing stopping Congress from revisiting this law, ratifying the consent agreements with conditions, and thereby removing whatever meaningful restraint a state might assert. Thus, ultimately what is offered as a thoughtful contract provision could be rendered inoperable, and could eviscerate a state's protection against altered, less favorable terms.

Therefore while S. 3469 sought to address this issue, it did not go far enough. By contrast, NRDC's prescription ending the anachronistic AEA exemptions solves the matter of meaningful state oversight and does not carry with it substantial likelihood of congressional terms and modifications exacted from states years into a good faith negotiation on a site. Indeed, while it would be possible for a future Congress to revisit the AEA and re-insert exemptions from environmental law, it would have to do so in a manner that would remove overdue jurisdictional authority from all states (or Congress would have to single out one state for special treatment). The difficulty of prevailing over the interest of all 50 states rather than simply amending legislation that affects the interests of just one state should be apparent.

Recommendation 4 – Address Storage In A Phased Approach Consistent With The Careful Architecture Of S. 3469.

Efforts to initiate a temporary storage facility must be inextricably linked with development of a permanent solution. This linkage, which is a crucial guard against a "temporary" storage facility becoming a permanent one, should guide the legislative process. Consistent with the BRC's findings, a case can only be made for interim storage if it is an integral part of the repository program and not as an alternative to, or de facto substitute for, permanent disposal.

Rather than prematurely bypassing a careful process that can arrive at protective, environmentally sensible and scientifically defensible solutions, NRDC urges spent fuel storage efforts to focus on vigorous efforts by industry and by appropriate regulatory authorities to ensure that all near-term forms of storage meet high standards of safety and security for the decades-long time periods that interim storage sites will be in use. While NRDC can agree with the overall concept of consolidated interim storage for a measured amount of spent fuel that meets strong safety criteria (moving fuel from seismically active areas, for example) and removing the stranded fuel from decommissioned plants, we can only do so after the introduction of a phased approach, as the general architecture of S. 3469 suggests, but is unfortunately dispensed with in the current iteration of the Senate bill.

The only situation where NRDC sees merit in a pilot project(s) is to address the current total stranded spent fuel at the closed reactor sites, accommodated in a hardened building at one or more sites that follows the example of the Ahaus facility in Germany. Potential volunteer sites that have already demonstrated "consent" are operating commercial reactors. Far less of the massive funding that would be necessary in the way of new infrastructure would be required and the capacity for fuel management and transportation is already in place, along with consent necessary for hosting nuclear facilities in the first instance.

Recommendation 5 – Exclude Unsafe, Uneconomic Closed Fuel Cycle And Reprocessing Options From This Effort.

S. 3469 wisely resisted inclusion of support for reprocessing, fast reactors, or other closed fuel cycle options. Consistent with BRC Findings, there are "no currently available or reasonably foreseeable" alternatives to deep geologic disposal. As Senator Bingaman noted, "even if we were to reprocess spent fuel, with all of the costs and environmental issues it involves, we would still need to dispose of the radioactive waste streams that reprocessing itself produces and we would need to do so in a deep geologic repository."

Conclusion

There is one area where we certainly agree with every member of the Subcommittee. The history of the federal nuclear waste program has been dismal. But decades from now others will face the

precise predicament we find ourselves in today if Congress tries to ram through unworkable solutions contentiously opposed by States, lacking a sound legal structure of science-based foundation, and devoid of public understanding and consent. The current efforts to quickly open Yucca Mountain and an interim storage facility simply will not work. Unless Congress fundamentally revamps how nuclear waste is regulated and allows for meaningful State oversight by amending the AEA to remove its express exemptions of radioactive material from environmental laws, we're doomed to repeat this dismal cycle until a future Congress gets it right.

Thank you again for this opportunity and I am happy to answer any questions.

Mr. SHIMKUS. Thank you.

Now, last but not least, Mr. Ronningen, manager of Rancho Seco Assets, Decommissioning Plant Coalition.

You are recognized for 5 minutes.

STATEMENT OF EINAR RONNINGEN

Mr. RONNINGEN. Good morning. I am Einar Ronningen, manager of the Rancho Seco Nuclear Facilities for the Sacramento Municipal Utility District, known as SMUD. And I am here today on behalf of the Decommissioning Plant Coalition.

The DPC is comprised of companies whose sites have ceased all commercial nuclear-generating operations. Our members own 10 facilities in the States of California, Connecticut, Illinois, Maine, Massachusetts, Michigan, Vermont, and Wisconsin. We appreciate this opportunity to provide our perspective on the status of U.S. Nuclear waste management policy.

SMUD's Rancho Seco nuclear-generating station ceased commercial operation in 1989, but there remains an 11-acre independent spent fuel storage installation containing 22 dual-purpose cannisters licensed for the dry storage and transportation of used nuclear fuel and greater than Class C waste ultimately destined for disposal by the DOE. As is the case with other utilities, SMUD has successfully litigated a partial breach of contract claim against the DOE to recover the costs incurred in our management of this material. To date, SMUD has won judgments in the U.S. Court of Claims totalling $73 million. These damage awards have been paid by taxpayers out of a permanent appropriations account in the Treasury called the Judgment Fund. Industry-wide taxpayer liabilities for the government's failure to perform under the contracts in a timely manner are approaching $4.5 billion, and DOE estimates that its liability will reach almost $13 billion by 2020, increasing annually by $500 million per year if it does not find a way to begin satisfying its obligation by 2022.

From the outset, the DPC has been supportive of Yucca Mountain, and in the early years of our organization, we worked with Congress in urging DOE to prepare a sound license application, address the transportation infrastructure requirements, and otherwise take steps to prepare for the movement of this material from our sites on a priority basis.

Nonetheless and without repeating the oft-reported historical details, Mr. Chairman, let me just state the obvious. Although the spent fuel at all our utility sites is and will be safely managed for as long as it takes, right now U.S. nuclear waste management policy is broken.

The DPC sincerely appreciates the efforts you have made, Mr. Chairman, to reinvigorate the debate over the future of Yucca Mountain, and we were heartened by the finding of the NRC staff in their Safety Evaluation Report that the application demonstrates the ability of the site to meet all post-closure requirements of that agency. But we note that the staff also found that it could not yet recommend the issuance of a construction authorization due to several findings, including the lack of institutional control of the site and access to water rights necessary for the construction and operation of the facility, issues that will require the

enactment of further legislation. The need for further legislation, the continued opposition by significant leaders in the State of Nevada, the dismantlement of the Office of Civilian Radioactive Waste Management at DOE, the technical licensing challenges filed by opponents of the project, and the track record of DOE in completing one-of-a-kind facilities on time and within budgets, combined with the level of financial resources that need to be appropriated by Congress in a constrained fiscal environment to license, construct, and operate the proposed repository, lead us to the uneasy conclusion that the uncertainties of when Yucca Mountain would be open are not likely to be overcome in timeframes that meet the equity interests of our host communities. It is because of our members' commitments to our host communities to resolve the current stalemate in U.S. nuclear waste policy as expeditiously as possible that we urge this committee to support the legislation that would not only take steps to get the Nation's geologic repository program back on track but also authorize the establishment of an voluntary incentive-based siting program that would lead to the licensing of a consolidated interim storage facility and to initiate a pilot program to remove the material from our sites on a priority basis.

We are pleased that two potential storage projects have been announced by capable private sector companies in the past four months. These could offer DOE the means to meets its contractual obligations.

Mr. Chairman, and members of the subcommittee, a pilot storage program that prioritizes the removal of material from permanently shutdown sites that is responsive to private sector initiatives, can be accomplished with reasonable support from the Nuclear Waste Fund without any impact on the repository program. The pilot would demonstrate the ability of the Federal Government to plan and execute their responsibilities for waste acceptance and transportation under the standard contract, relieve the taxpayer of the obligation to continue paying Judgment Fund damages, and allow these sites to be repurposed for useful purposes.

We applaud your steadfast interest in a vibrant repository program, and we urge you to look favorably on the passage of legislation establishing a consolidated interim storage program that takes advantage of these new opportunities to remove used fuel and greater than Class C waste from those facilities where commercial reactor operations have permanently ceased.

Thank you for the opportunity, and we look forward to questions you may have.

[The prepared statement of Mr. Ronningen follows:]

Statement for the Record
Mr. Einar Ronningen
Manager, Rancho Seco Assets
Sacramento Municipal Utility District

Subcommittee on Environment and the Economy
House Committee on Energy and Commerce
"Update on the Current Status of Nuclear Waste Management Policy"
May 15, 2015

Good Morning Chairman Shimkus, Ranking Member Tonko, and Members of the Subcommittee. I am Einar Ronningen, the Manager of Rancho Seco Assets for the Sacramento Municipal Utility District (SMUD), and I am appearing today on behalf of the Decommissioning Plant Coalition (DPC).[i] The DPC, comprised of companies that own sites where all commercial nuclear generating activities have ceased, appreciates this opportunity to provide our perspective on the status of U.S. nuclear waste management policy.

By way of background, SMUD's Rancho Seco Nuclear Generating Station ceased commercial operation in 1989, decommissioning planning began in 1991, commodity removal began in 1997 and in October 2009 the Nuclear Regulatory Commission (NRC) released the majority of the site for unrestricted public use, excluding approximately 11 acres of land that holds an Independent Spent Fuel Storage Installation (ISFSI) that contains 22 dual-purpose systems licensed for the dry storage and transportation of used nuclear fuel and Greater-Than-Class-C (GTCC) waste ultimately destined for disposal by the Department of Energy (DOE).

As is the case with other contract holders[ii] SMUD has litigated a partial breach of contract claim against DOE, seeking to recover the costs incurred in our

management of this material, which the Department was required to begin accepting in 1998. To date, SMUD has won judgments in the U.S. Court of Federal Claims totaling $73 million, covering costs through 2009. These monies have been paid out of a permanent appropriations account in the Treasury called the Judgment Fund.

From the outset, one of the chief goals of the DPC has been to hasten the day when the federal government will meet its contractual obligations to remove the used fuel and GTCC material stranded on our various sites. As the Nuclear Waste Policy Act (NWPA), as amended in 1987, was already 14 years old when we formed, we supported the Yucca Mountain project and worked with Congress in urging DOE to prepare a sound license application, address the transportation infrastructure requirements necessary to support a phased-in shipping campaign, and otherwise take steps necessary to prepare for the movement of this material from our sites on a priority basis.

As I suspect is the case with other contract holders, we watched with concern the development of political opposition to the Yucca Mountain project in the State of Nevada and could not help but notice the commitment of virtually every Presidential candidate of both parties to re-examine the project during the 2008 campaign season. Our concerns were realized when the current Administration determined that the project was no longer workable and began to close down the licensing effort beginning in 2009.

The DPC appreciates the efforts the Chairman of this Subcommittee has made to reinvigorate the review of the Yucca Mountain license application filed by the DOE in 2008 and we were heartened by the finding of the NRC staff in their Safety Evaluation Report (SER) that the application demonstrates the ability of the site to meet all post-closure requirements of that agency, including the ability to isolate material stored at the site from the accessible environment for a million years. But we note that the staff also found that it could not yet recommend the issuance of a construction authorization due to several findings, including the lack of institutional control of the site and access to water rights necessary for the construction and operation of the facility, issues that will require the enactment of further legislation to cure.

The need for further legislation, the continued opposition of significant leaders in the State of Nevada to the project, the dismantlement of the Office of Civilian Radioactive Waste Management at the DOE, the technical licensing challenges filed by Nevada and other opponents of the project, the track record of the DOE in completing one-of-a-kind facilities on time and within budgets, and the level of financial resources that need to be appropriated by Congress to license, construct and operate the proposed repository lead us to the inescapable conclusion that the uncertainties of when a Yucca Mountain facility would be in the position to begin accepting material from our facilities are not likely to be accomplished in time frames that meet the equity interests of our host communities.

It is because of our commitments to our host communities to resolve the current

stalemate in U.S. nuclear waste policy as expeditiously as possible that we have urged the Blue Ribbon Commission on America's Nuclear Future (BRC) and Congress to support the establishment of a voluntary, incentive-based siting program that would lead to the licensing of a consolidated interim storage (CIS) facility and to initiate a pilot program to remove the material from our sites on a priority basis. This pilot would demonstrate the ability of the federal government to plan and execute their responsibilities for used fuel and GTCC waste acceptance and transportation under the Standard Contract, relieve the taxpayer of the obligation to continue paying Judgment Fund damages as increasingly required by decisions of the courts adjudicating used fuel cases and allow these sites to be freed for other useful purposes.

We are pleased that two potential consent-based CIS sites have been announced in the past four months – one in west Texas by Waste Control Specialists and another in southeast New Mexico by the Lea-Eddy Energy Alliance. As we understand it, both of these efforts are being led by the private sector and involve companies with the know-how and resources necessary for the successful licensing of a facility that could offer DOE the means to meet its contractual obligation.

Mr. Chairman and Members of the Subcommittee, as you examine possible legislative options to address our current policy failure, and there really is no other word to describe the current situation, the DPC urges you to include not only provisions that would support the continuation of Yucca Mountain licensing, but also provisions leading to the establishment of a CIS program, one that prioritizes

the removal of material from permanently shutdown sites, is responsive to private sector initiatives currently unfolding and can be accomplished with reasonable support from the Nuclear Waste Fund without any impact upon the repository program. As noted by the BRC in its final report, "[T]he magnitude of the cost savings that could be achieved by giving priority consideration to shutdown sites appears to be large enough (i.e., in the billions of dollars) to warrant DOE exercising its right under the Standard Contract to move this fuel first."

We believe that the inclusion of such a Consolidated Interim Storage program as part of the Nation's nuclear waste disposal program will restore the confidence of local communities in the federal government's will to meet its statutory and contractual obligations.

We believe that establishing a Consolidated Interim Storage program will address the increasing regulatory costs at our sites, as the material would otherwise remain stranded for longer periods of time than anyone ever imagined.

We believe that a successful Consolidated Interim Storage program will enable our communities to repurpose the multiple sites that are currently restricted by safety and security requirements.

We applaud your steadfast interest in a vibrant repository program. And, we urge you to act on the recommendations from your colleagues to include legislation for a Consolidated Interim Storage program that takes advantage of new opportunities to remove used fuel and Greater-Than-Class-C waste from those facilities where

commercial reactor operations have permanently ceased.

Thank you for the opportunity to participate and I look forward to any questions you may have.

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[i] The DPC was established in 2001 out of the recognition that the overwhelming attention of the regulator, the industry and policy makers would be focused on the operating fleet and provides a forum for the identification of federal policy and regulatory issues of unique or special concern to decommissioning civilian nuclear facilities. Since its inception, plants that have been represented in the work of the DPC include: Big Rock (MI), Connecticut Yankee (CY), Dairyland (WI), Humboldt Bay (CA), Maine Yankee (ME), Rancho Seco (CA), San Onofre (CA), Vermont Yankee (VT), Yankee Rowe (MA) and Zion (IL).

[ii] In the Nuclear Waste Policy Act of 1982 (NWPA), the owners of civilian nuclear power reactors were required to enter into contracts with the DOE and pay a fee, based on the amount of electricity generated at those reactors. Those fees have been deposited into the Nuclear Waste Fund, invested in interest bearing accounts and are to be made available for the siting, construction and operation of facilities described in the Act. In return, the DOE was obligated to begin accepting used fuel at each reactor, based generally on the concept of the oldest fuel first, in 1998. The NWPA and the Standard Contract developed pursuant to the Act (found at 10 CFR 961) allows the DOE to accord priority to any used fuel or GTCC waste "removed from a civilian nuclear power reactor that has reached the end of its useful life or has been shut down permanently for whatever reason."

Mr. SHIMKUS. Thank you. You did a great job, so I appreciate the testimony.

And I will recognize myself 5 minutes for the first round of questions.

With the finish of the Safety and Evaluation Report, we now move to the next step, which is the license application. A very simple question, and as much as possible I would like to get a yes-or-no answer because it is just based upon the license application. After 30 years of scientific evaluation and $15 billion spent on the project, we are still waiting for the final determination about the suitability of Yucca Mountain to serve as a permanent geological repository. Just going down the witness table, I would like to ask each one of you if you believe that the NRC should finish this process and issue a final decision.

Mr. FITZ. As long as it is legally mandated under the Nuclear Waste Policy Act, the answer is yes.

Mr. SHIMKUS. Thank you, Ms. Piccone.

Ms. PICCONE. It is dependent on congressional action and appropriations to the Agency.

Mr. SHIMKUS. But having the appropriated money, the NRC would finish the application process.

Ms. PICCONE. Yes.

Mr. SHIMKUS. Mr. White.

Mr. WHITE. Yes, and——

Mr. SHIMKUS. That is good enough for me.

Mr. Kuczynski.

Mr. KUCZYNSKI. Yes, unanimous.

Mr. SHIMKUS. Mr. Fettus.

Mr. FETTUS. No.

Mr. SHIMKUS. So you don't believe that if there is appropriated money, that the Federal Government should not follow the law? You are testifying right now that we should not follow the law?

Mr. FETTUS. Mr. Chairman, that is——

Mr. SHIMKUS. I am going to go—Mr. Ronningen. I am reclaiming my time. Mr. Ronningen.

Mr. RONNINGEN. Yes.

Mr. SHIMKUS. Thank you very much.

Mr. Fitz, your testimony provided an excellent description of the D.C. Court of Appeals ruling on the Aiken County case. If Congress provides additional funding to DOE and the NRC to complete the Yucca Mountain license, as the House of Representatives passed recently, would the writ of mandamus extend to the new funding and require action on the license?

Mr. FITZ. I think if you take the D.C. Circuit mandamus decision in concert with the Atomic Safety and Licensing Board's decision that denied withdrawal to the Department of Energy, those two together indicate that the proceeding should move forward, that it is legally mandated, and that both entities, the Department of Energy and the NRC, are obliged to complete the process.

Mr. SHIMKUS. They are obliged to complete the process. That is what you are testifying?

Mr. FITZ. That is what I am testifying.

Mr. SHIMKUS. And I think, following the previous testimony, both then Secretary Chu and Secretary Moniz, have both testified, given

that scenario, they would be mandated to comply. And we have the records to support that statement.

Mr. Kuczynski, your testimony discusses possible support for increased incentives for the State of Nevada. Would you please describe what sort of incentives could be included for a community?

Mr. KUCZYNSKI. First of all, we support the permanent repository, but we also support reasonable incentives to help construct the facility for Nevada. That has been our consistent testimony. Barney Beasley testified here in 2006 the exact same point, and our position has not changed.

Mr. SHIMKUS. What could some of those be?

Mr. KUCZYNSKI. Infrastructure, education, anything that allows the process to move forward to continue the licensing process and the actual construction of the facility.

Mr. SHIMKUS. Commissioner White, do you agree that we should and could support these types of incentives?

Mr. WHITE. Yes, they make sense. It is entirely appropriate for a community that may be hosting this facility to receive some kind of incentive benefits, yes.

Mr. SHIMKUS. Thank you very much.

Based upon time, I am going to yield back and recognize my Ranking Member, Mr. Tonko, for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair.

And, again, welcome to our panelists. Dr. Piccone, the Nuclear Regulatory Commission has a policy in the form of the Waste Confidence Rule that, as I understand it, links the licensing of nuclear reactors to the availability of safe storage and, more importantly, permanent disposal capability for nuclear waste. Can you briefly explain what that means in practical terms for the licensing any of our nuclear reactors?

Ms. PICCONE. I am sorry, Mr. Tonko. I don't have that information, but I can go back to staff and get that for the record for you.

Mr. TONKO. Are there any on the panel that would want to speak to the waste confidence rule?

Mr. Kuczynski.

Mr. KUCZYNSKI. Yes, I think it is more appropriate today to call it about the continued storage rule where the NRC has revised the Waste Confidence Rule that they reviewed the storage of spent fuel at our facilities for a variety of scenarios, and the conclusion was, from a safety, environmental, security standpoint, that we can store onsite for significant lengths of time.

Mr. TONKO. Thank you. And, Dr. Piccone, under a best-case scenario, what is a minimum time to complete NRC's process and issue a construction license?

Ms. PICCONE. There are three things that are necessary for a decision to be made. One is the completion of the supplement to the Environmental Impact Statement, then the adjudicatory hearing, and then the Commission to make a decision on the contested and uncontested issues. It is hard to speculate on the length of time it would take for the adjudicatory proceeding. There are approximately 300 contentions and there may be additional new contentions or amended contentions. The adjudicatory hearing is suspended right now, and there is no schedule for a hearing.

Mr. TONKO. Well, given those conditions, do we not need an interim policy of some sort?

Ms. PICCONE. An interim policy?

Mr. TONKO. Interim storage.

Ms. PICCONE. Well, the waste is being stored right now safely at nuclear power plants.

Mr. TONKO. But should there be an improved or more conclusive or predictable process if this interim is challenged on the given situations that we have today?

Ms. PICCONE. I think that is a national policy decision, sir, and not NRC.

Mr. TONKO. Mr. Fettus, your organization sued NRC against the 2010 revision of the Waste Confidence Rule, as did New Jersey and several other States. Can you explain why you did that and where things stand today from your perspective?

Mr. FETTUS. Thank you, Mr. Tonko.

Yes we did. And we were successful in front of a bipartisan panel of the D.C. Circuit with the decision in 2012. The reason why we sued was the lack of a basis for the NRC's judgment that there would be confidence that there is a long-term disposal option on the table. And, importantly, the problem was not necessarily that Yucca Mountain does not exist. The problem is that there was no NEPA review supporting, supporting, the NRC's decision. The NRC has conducted a NEPA review, and they have finalized it, and we have challenged that current review once again in the United States Court of Appeals, and that litigation is pending. The issue there is whether or not, at least as far as we are concerned, whether or not the NRC complied with the D.C. Circuit's explicit directions in the 2012 decision and whether or not the NEPA review complies with the law. And the NEPA review is the National Environmental Policy Act and the environmental impact statement that needs to inform its decision on whether or not there is confidence to store the waste in the interim time up to the final disposal.

Mr. TONKO. Thank you.

With that, I yield back.

Mr. SHIMKUS. The gentleman yields back his time.

The chair now recognizes Mr. Harper from Mississippi for 5 minutes of questions.

Mr. HARPER. Thank you, Mr. Chairman.

And thanks to each of you for being here and making this effort on such an important issue.

Mr. Fitz, if I could talk to you for a moment, the Department of Energy recently announced its intention to initiate a new permanent repository program for nuclear material generated from National defense activities. As you are aware, Washington State holds about two-thirds of all defense material at the Hanford site. Did DOE consult with the State of Washington prior to making this announcement?

Mr. FITZ. Thank you for the question. I am not aware of the consultation. I can't say that it did not occur, but it is not within my personal knowledge, and I can say personally that the announcement caught me by surprise.

Mr. HARPER. Were you advised of anyone that told you, yes, they told us about it, or you just can't rule it out because you are not privy to it.

Mr. FITZ. It is the latter, or both I should say. I have not heard of any mention of consultation, and I can't rule it out.

Mr. HARPER. Does Washington believe this new policy would help the Federal Government fulfill its responsibilities under the Tri-Party Agreement between DOE, the Environmental Protection Agency, and the State of Washington?

Mr. FITZ. There is not a deadline in the Tri-Party Agreement for actually disposing of waste. There is a deadline for getting waste treated, which right now I think is in question with waste treatment plant delays. As to the wisdom of splitting off the defense stream from commercial waste, I would say a couple of things. First, our position has been consistent that as long as the law requires moving forward with the Nuclear Waste Policy Act process for licensing Yucca Mountain, that should be respected. I can speak to what I understand to be my clients' policy position that pragmatically if there is another way to get waste disposed of more quickly, they are open to that, but I would echo what Mr. Fettus said—or, I am sorry, Mr. White said about DOE's schemes that don't have certainty or budget as a substitute for what right now is the legal process.

Mr. HARPER. One last area. I understand that the high-level tank waste at Hanford is to be vitrified into large logs that are engineered to be disposed in Yucca Mountain. If DOE pursues a defense-only repository, what will happen with the vitrified waste logs from Hanford, and would this delay the shipment of material out of Washington State?

Mr. FITZ. I think that is an unknown, and that is a concern for Washington.

Mr. HARPER. Thank you very much.

I yield back in the interest of time.

Mr. SHIMKUS. Gentleman yields back his time. We think we have got—with the votes that are just called—we think we have got 15 or 20 minutes left. We will try to quickly get to everybody. And then we will decide how to deal with the panel.

The chair recognizes the gentleman from California, Mr. McNerney, for 5 minutes.

Mr. MCNERNEY. Thank you, Mr. Chairman.

It is interesting testimony. And I appreciate you all coming down here today.

Mr. SHIMKUS. Jerry, pull your mic up to you so that people——

Ms. PICCONE. Yes, as discussed in detail in Volume 4 of the Safety Evaluation Report, the geologic repository operations area, or the GROA, which is part of the repository, must be located on lands that are either acquired and under the jurisdiction and control of DOE or permanently withdrawn and reserved for its use. The land on which the repository operations area will be located must also be free and clear of significant encumbrances, such as mining rights deeds, rights of way, or other legal rights.

In its application, DOE explained that it submitted a land withdrawal legislation to Congress in 2007. Congress did not enact that bill and DOE has not completed any other land acquisition process.

Therefore, NRC staff concludes that DOE has not acquired the lands needed for the repository operations area, nor have any necessary lands been permanently withdrawn and reserved for DOE's use. In addition, because DOE has not completed a land withdrawal or other acquisition process, DOE has not demonstrated that the land would be free and clear of significant encumbrances.

Mr. MCNERNEY. That is an issue for the Congress to deal with, is that right?

Ms. PICCONE. That is what DOE submitted in their application. That is what NRC reviewed. DOE could submit additional information identifying other mechanisms and NRC would then review those as well.

Mr. MCNERNEY. Mr. Ronningen, thank you for coming. A little part of my district is in [inaudible] Territory. So I appreciate what you are doing. You mentioned that there were two private entities that announced sites in the last 4 months. Could you expand on that a little bit?

Mr. RONNINGEN. Yes, sir. The Lee Eddy Group in New Mexico has approached the industry to develop centralized interim storage. And the WCS, Waste Control Specialists, in Texas has also come forward to announce that they wish to develop centralized interim storage.

Mr. MCNERNEY. Those are both [inaudible]

Mr. RONNINGEN. Right. They would be consolidated interim storage, not repositories.

Mr. MCNERNEY. Is there any possibility there would be local support for those projects?

Mr. RONNINGEN. They are already working on that.

In the case of Waste Control Specialists, a couple years ago they were successful in garnering local support for a low-level waste facility. And they wish to expand that to consolidate interim storage. And, again, the Lee Eddy Group has been working with local community members to get that approval from their constituents.

Mr. MCNERNEY. Thank you.

Mr. White, you also mentioned the need for public-private partnerships. What do you have in mind exactly for that?

Mr. WHITE. A single-purpose entity that would be solely responsible for the management of the program. One of the problems with the Department of Energy's management is that they are a large organization, rather unwieldy. This program tends to be one of the minor focuses of the Department. We need an agency or, again, a public-private corporation that would have the authority and the focus to simply work on this issue alone.

Mr. MCNERNEY. Thank you, Mr. Chairman.

I yield back my time.

Mr. SHIMKUS. Thank you very much for yielding back.

The chair now recognizes the gentleman from Kentucky, Mr. Whitfield, for 5 minutes.

Mr. WHITFIELD. Thank you very much, Mr. Chairman.

And thank you all for joining us today.

Mr. Kuczynski, when I go to the [inaudible] Talk about nuclear waste. And we talk about the almost $20 trillion of Federal debt that we are approaching in this country. And, in 1982 I think, Con-

gress passed the Nuclear Waste Policy Act. And I think in 1987, Congress identified Yucca Mountain——

Mr. SHIMKUS. Ed, make sure you talk loud. I don't think your microphone is working anymore. And I think we have lost them on the panel except for the chairman. I wonder how that happened.

Mr. WHITFIELD. Anyway, so Congress identified Yucca Mountain as the permanent spot. And then we started spending large sums of taxpayer dollars in preparing Yucca Mountain. And I don't know the exact figure, but I understand it was roughly $10 billion or $12 billion in preparation. And then, in 2010, the Obama administration made a decision that they were not going to pursue the licensing process. And then a lawsuit was filed by various groups saying that the NRC and DOE were violating the law. And the petitioners or plaintiffs won that lawsuit. And, at some point in there, the Federal Government could not meet its legal obligation to take possession of this waste and move it to Yucca Mountain or a permanent site. And so another lawsuit was filed on that, and now there are judgments against the Federal Government for that. So, the amount of dollars the taxpayers have been paying out, and we still don't have a permanent site. And now this administration is saying that we need a separate site for military nuclear waste.

And it is so frustrating because Congress made a decision a long time ago under Federal law to do this. And I understand our process of filing lawsuits, and we all have the right to do that. But, I mean, don't you think that taxpayers have a right to just be totally upset about this process and the fact that—I am sure that you would like to see Yucca Mountain open as well. But am I being inaccurate in what I am saying here? I may have a few factual points that are not correct. But, philosophically, the American people are being taken to the cleaners on this. And it is a statement that Congress has clearly said that we want it to be at Yucca Mountain. Am I wrong on this?

Mr. KUCZYNSKI. No. We share your frustration. I think you are accurate in almost everything you have said. And there are downsides, the longer this is prolonged, the more expensive it is for taxpayers and utility rate customers. The science has been completed. The NRC has ruled, utilized that $12 billion to $15 billion to use the best experts we have in our country. NRC is seen as the gold standard and that ought to mean something. So, from a science standpoint, the Yucca Mountain facility, obviously a couple more hurdles, but it is set to be a repository. And that is the best way to serve the interests of taxpayers and customers across this country.

Mr. WHITFIELD. Well, personally, I think it is very frustrating that the Obama administration is doing everything that they can do to create obstacles.

And I would just like to publicly thank the chairman of this subcommittee, John Shimkus, because he has been a real leader in trying to make sure that the intent of Congress is pursued and followed through on this. And so many of us want to help him in any way that we can to complete this project and get it behind us. We have spent enough time and money on this in my humble opinion.

Mr. KUCZYNSKI. In our view of the process back in the 1980s, under the Nuclear Waste Policy Act, there are provisions for local

communities and States to take part in that process. They did take part. Congress overrode those objections. And we ought to follow the law.

Mr. WHITFIELD. I yield back.

Mr. SHIMKUS. The gentleman yields back his time.

The chair now recognizes—and we are fine on time, Gene—5 minutes for questions. And if you want to come down here and use this mic, you can.

Mr. GREEN. I think I can probably talk without it.

Mr. SHIMKUS. Now it is working.

Mr. GREEN. I was out at Yucca Mountain, what, 4 years ago with the chair. I didn't go on the last trip you did because, coming from Texas, I was actually on an offshore oil rig. When I was out there, we met with all the county officials where Yucca Mountain is. And it seemed like, to an elected official, in the counties around Yucca Mountain, they all supported the use of the permanent repository. But my first question was, has any country in the world developed a long-term nuclear storage? Because I know Sweden, I went there one time, and they had a prototype of a hole in the ground. And, of course, they joked that Sweden is nothing but granite, so you can put anything down there. But has any country developed a long-term nuclear storage?

Mr. FETTUS. The only operating geological repository was in the United States, which is the WIPP facility in southeastern New Mexico for transuranic waste or trace amounts of plutonium for defense, transuranic waste. And it is currently shut down after an accident in February of 2014.

Mr. GREEN. OK. My big concern, though, is the interim storage because of what is happening. And, by the way, Mr. Kuczynski, I congratulate Southern Company because I am a supporter of expansion of nuclear power. And you have the first expansion in decades to be able to do it because if you are worried about carbon, nuclear power is a solution. Now, we need to deal with the storage capacity, both long term and interim. But my question is about the interim storage. Are there safety concerns about storing the spent nuclear facilities on the locations they are now?

Mr. KUCZYNSKI. No. We have constructed our spent fuel pools and our dry cask storage facilities. They meet strict environmental, safety, security requirements. And recent studies have shown both of safe for the foreseeable future. And that was a basis of the continued storage rule.

Mr. GREEN. What is the cost for the Department of Energy's failure to take title of that spent fuel? Have you all estimated that?

Mr. KUCZYNSKI. I can give you some ballparks, every cask that we load on the dry cask I would just say it is about $2 million. And we have about 100 of them in our system. We plan to do about 25 of them a year going forward. So that is ballpark. And we do not recover all of those funds through litigation. In fact——

Mr. GREEN. I assume you have to go, the ratepayers are actually paying for that?

Mr. KUCZYNSKI. Absolutely.

Mr. GREEN. Would opening an interim storage facility help relieve many of those storage concerns, nuclear, and I assume the other companies around the world, around the country anyway?

Mr. KUCZYNSKI. The interim storage?

Mr. GREEN. Yes.

Mr. KUCZYNSKI. I think that is an avenue that this committee ought to look at. Our position is the long-term repository is the method. The statutory limit of, I think, the capacity is not necessarily technically based. I think we ought to pursue all storage at Yucca. Interim at Yucca would make more sense to me than interim storage at other facilities. Each time you build something new and then have to continue to move, it makes it more expensive for everybody.

Mr. GREEN. Well, obviously, we need to develop a long-term storage. But I would also like to see on a lot of the companies, including the south Texas project that I supported back as a State legislator in the 1970s, I would like to see expansion there. But we do need to have long-term storage. And, ultimately, I think we ought to take responsibility as a Federal Government for the interim storage in locations that are around the country. Maybe they are not all like what Southern Company does or Sacramento or someplace else. But I think it is our responsibility. We need to deal with it.

Mr. KUCZYNSKI. In general, we are not opposed. However, I think the law states that licensing of the long-term facility is first priority and then interim is after that.

Mr. GREEN. OK. Mr. Chairman, I will yield back my time. Thank you for the hearing.

Mr. SHIMKUS. The gentleman yields back his time.

We have 45 seconds before the votes are closed on the floor. I really want to appreciate and thank my colleagues for being really precise and attempting to be to the point.

After consultation with the minority, we have agreed to adjourn in a minute. So we won't come back for additional questions. We want to thank you for your testimony.

I want to remind you that the hearing record is open for 10 business days, so you may get questions submitted for the record. If you would then reply to us in that case, we would appreciate it.

With that, again, thank you very much. And the hearing is adjourned.

[Whereupon, at 10:12 a.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

PREPARED STATEMENT OF HON. FRED UPTON

Thank you, Chairman Shimkus, for holding this hearing and for your continued leadership on this important issue. I also thank the witnesses for being here this morning.

It's a pleasure to welcome Commissioner Greg White, who has served on the Michigan Public Service Commission since 2009. Commissioner White's service and national leadership on nuclear issues will be missed when his term concludes this summer.

33 years after the Nuclear Waste Policy Act was enacted into law, the federal government continues to struggle to fulfill its legal obligations to properly dispose of our spent nuclear fuel from commercial power plants, and our defense nuclear waste. Ironically, it's the lack of appropriations to finish out the job that is forcing additional costs on to American consumers and taxpayers.

The Nuclear Regulatory Commission, in partnership with the Department of Energy, has a statutory obligation to complete the licensing process for Yucca Mountain. To support this effort, the House of Representatives recently passed an appropriations bill with strong funding levels for DOE and NRC explicitly for this pur-

pose. Additionally, the bill prohibited DOE from walking away from Yucca Mountain.

But after 30 years and $15 billion spent on this permanent repository we seem to be at a standstill, and the current administration's nuclear waste management policy appears to be simply "delay and complicate."

For example, in March the administration announced it would separate the disposal path of material generated by defense activities from commercial spent nuclear fuel and pursue a new repository solely for defense waste. This announcement marked a major departure from a 30 year-old bipartisan policy to dispose of commercial and defense waste in a single repository.

Recently there has been renewed interest and urgency in solving our nuclear waste management system deadlock. Breaking this deadlock will likely require legislation. Some suggest an interim storage program, intended to take title to commercial spent nuclear fuel and move defense nuclear waste on an accelerated timeframe. However, the Nuclear Waste Policy Act blocks licensing of an interim storage facility until construction of a permanent geological repository is authorized by the NRC. Linking an interim storage site to the development of a permanent repository could represent a breakthrough in nuclear waste management policy. But we must ensure that spent nuclear fuel will not be stored in an "interim" facility forever.

Other proposals emphasize moving "stranded fuel," or spent nuclear fuel from shutdown reactors. Despite the urgency many of us feel about these closed down sites, taking care of them should not be pursued to the exclusion of dealing with fuel throughout the entire system.

I hope today's hearing will advance the discussion to break the current impasse in our nation's nuclear waste management policy. Our witnesses today bring years of experience and deep commitment to resolving the nuclear waste question.

FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS

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House of Representatives
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June 9, 2015

Mr. Andy Fitz
Senior Counsel
Office of the Attorney General
State of Washington
1125 Washington Street, S.E
P.O. Box 40100
Olympia, WA 98504

Dear Mr. Fitz:

Thank you for appearing before the Subcommittee on Environment and the Economy on Friday, May 15, 2015, to testify at the hearing entitled "Update on the Current State of Nuclear Waste Management Policy."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Tuesday, June 23, 2015. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515 and e-mailed to Will.Batson@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

John Shimkus
Chairman
Subcommittee on Environment and the Economy

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment

Bob Ferguson
ATTORNEY GENERAL OF WASHINGTON
Ecology Division
PO Box 40117 • Olympia, WA 98504-0117 • (360) 586-6770

June 26, 2015

Honorable John Shimkus
Chairman, Subcommittee on Environment and the Economy
c/o Mr. Will Batson, Legislative Clerk
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Representative Shimkus:

Enclosed are the State of Washington's responses to your additional questions pertaining to the May 15, 2015, hearing entitled "Update on the Current State of Nuclear Waste Management Policy." Because these questions primarily implicate policy, rather than legal, issues, I have worked with my state government clients to answer the questions. The enclosed answers are provided on behalf of my clients.

Thank you again for the opportunity to testify before the Subcommittee on Environment and the Economy.

Sincerely,

[redacted]

ANDREW A. FITZ
Senior Counsel
[redacted]

AAF:def
Enclosure

RESPONSES BY ANDREW A. FITZ, SENIOR COUNSEL

WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL

ON BEHALF OF THE STATE OF WASHINGTON

TO ADDITIONAL QUESTIONS TO THE RECORD

POSED BY THE HONORABLE JOHN SHIMKUS

For the May 15, 2015, Hearing on

"Update on the Current State of Nuclear Waste Management Policy"

Before the

U.S. HOUSE OF REPRESENTATIVES

COMMITTEE ON ENERGY AND COMMERCE

SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

1. **As Congress moves forward to address the logjam associated with nuclear waste management policy, how can we protect the taxpayer to assure that total lifecycle system costs, including transportation, are not increased? What are some key principles to consider?**

Response: An overall "system plan" should be required of the implementing agency (currently the Department of Energy) that accounts for all aspects of the system and lifecycle, including siting, design, technical issue resolution, document development, construction, transportation, and public communication. These actions should be planned in detail, with cost and schedule for all parts of the system provided at the start, performance monitoring measures in place, and a requirement to develop and implement recovery plans when performance slips or unexpected technical issues arise. The plan should be subject to review and comment by impacted entities, such as generators that will ship waste to the repository, states impacted by the shipments (i.e., transportation routes), state and local communities around the repository, and technical experts. (A number of committees, national laboratories, and technical experts have been looking at many of these issues for years.) An independent agency or panel should be designated or appointed by Congress to report directly to Congress with its assessment of the plan. This "system" plan approach will provide accountability on the part of the implementing agency and provide Congress with a baseline for making appropriation decisions. It would expand on the similar, but more limited, planning and reporting requirements currently in 42 U.S.C. § 10134(e).

After the plan is in place, the implementing agency should have an ongoing reporting requirement to Congress. The independent agency or panel that reviewed the plan should also provide ongoing oversight of the project, with continued direct reporting to Congress.

To the fullest extent possible under the constraints applicable to Congressional appropriations, steady funding should be provided based on the plan, possibly on an overall "project" basis where the amount received each year is not subject to change (i.e., as a continuing appropriation from the Nuclear Waste Fund, if permissible, subject to Congressional rescission of the appropriation if circumstances warrant).

In terms of key principles to consider, we offer the following:

- Transportation decisions and public communication are of equal priority to siting and design in needing oversight, both fiscal and technical.
- There must be ongoing independent oversight of the process, preferably from a group that reports directly to Congress.
- The plan should be reviewed before authorizing final actions to design and construct.

2. **The Nuclear Waste Policy Act codified the principle of "linkage," in which an interim storage facility cannot be licensed prior to the licensing of a permanent repository. This concept assures that interim storage facilities will not become a "de facto" permanent repository. Do you agree with this principle?**

Response: We agree with the concern over approved interim storage facilities (ISFs) becoming potential "de facto" repositories. As things now stand, if such facilities are allowed, waste would be moved to ISFs before there is assurance that a permanent repository will be, or can be, developed. Further, as waste from multiple states is consolidated in a (presumably) smaller number of states, the political impetus to follow through on completing a permanent repository may diminish, making such completion less certain.

At the same time, the current situation has already created "de facto" interim storage facilities at every commercial reactor plant in the United States, as well as Department of Energy defense waste sites. This interim storage is not as safely planned as would be storage at a licensed ISF. Eliminating this storage is one of the primary purposes of the Nuclear Waste Policy Act (NWPA). *See* 42 U.S.C. § 10131(a)(2), (a)(7), (b)(1).

At present, it is unclear when a permanent repository will become available. The current Yucca Mountain licensing proceeding is in hiatus pending further appropriations. Even if the proceeding moves forward, there is no assurance that the Nuclear Regulatory Commission (NRC) will ultimately approve the Yucca Mountain license, or that other matters necessary to repository completion will align. If a different repository site is considered, it is not out of the realm to think that storage in the current configuration might continue for an additional 20 to 30 years—or even longer—based on experience to date with Yucca Mountain.

Given these considerations, we support the idea of potentially modifying the linkage between permanent repository licensing and creation of ISFs. While we believe there should be continued linkage to a permanent repository, we support moving forward with consolidated ISFs so long as reasonable progress is being made on a viable path forward toward one or more permanent repositories, as further outlined below.

A. As noted, the current law prohibits the license of an interim site until a repository is licensed. Do you have additional suggestions as to how this process could be modified to provide for concurrent development as part of a nuclear waste management system?

Response: At the outset, we note that modifying the current linkage may be unnecessary if the Yucca Mountain licensing process resumes in the near future and is not significantly further delayed. A license decision on Yucca Mountain would likely be made before the siting and licensing processes for any new ISF could be completed.

However, if this is not the case, we support modifying the linkage between permanent repository licensing and creation of ISFs. For the reasons outlined in response to the question above, we believe there should still be some linkage between ISF authorization and reasonable progress being made on a viable path forward toward one or more permanent repositories. One idea is to make this linkage through the "system plan" suggested in response to Question 1; e.g., conditioned on the plan being in place, a certain milestone in the plan being reached, or on project-basis appropriations having been provided.

Another consideration, which would apply to the development of both ISFs and permanent repositories, is to amend the NWPA to allow states to issue permits for both facilities, similar to the process that seems to have worked very well in New Mexico with respect to the Waste Isolation Pilot Plant. Outside of jurisdiction under the Resource Conservation and Recovery Act (RCRA) (which, if applicable, only relates to hazardous waste constituents), there is currently no formal mechanism for the states to have authority over high-level waste storage or disposal. A state regulatory role could be created either in tandem with NRC licensing, in concert with NRC licensing, or independent of NRC licensing. While adding another regulator might at first seem inapposite of a streamlining measure, it would ensure that the host state has a vested interest and a measure of control in the safe development and operations of the storage facility or repository. This has been a missing element in the Yucca Mountain project.

B. What sort of stipulations would be required to assure a permanent repository would be constructed? For example, do you support a maximum capacity limit on a consolidated interim storage site?

Response: In addition to the considerations outlined above, a maximum capacity could be used, or a prescribed time limit. If a time limit is used, there should be provision for the timely siting and development of replacement interim facilities before the prescribed limit is reached.

C. Do you support economic benefits and incentives for states and communities that offer to host an interim storage site?

Response: It is vital that economic benefits and incentives be part of the package. Such incentives appear to have worked well for the local communities around Yucca Mountain, which by all accounts still support the proposed repository. The difficulty seems to involve larger entities that have not seen a positive stake in the repository. Some of the concern has been over the political process, and some seems to be due to a failure to communicate how risks would be addressed. A strong communication process must be part of the repository approach. It must be undertaken from the outset of the project and must include continuous public briefings and meetings.

Economic benefits or incentives should extend beyond the local areas to include the larger state(s) around the proposed site (multiple states may be impacted), as well as travel corridors that impact potentially wide areas.

3. The Eddy Lea Energy Alliance recently proposed constructing an interim storage facility in Southeastern New Mexico. New Mexico Senator Martin Heinrich said, "I cannot support establishing an interim storage facility until we are sure that there will be a path forward to permanent disposal."

A. Is the lack of progress on Yucca Mountain hampering our ability to move forward on interim storage?

Response: Yes. Until the process for siting, planning, and constructing a permanent repository is "fixed" (i.e., defined and underway, in contrast to the current functional stasis), no regional or state entity will likely be supportive of accepting waste on an "interim" basis.

B. Would an expeditious review of the Yucca License application provide more certainty for interim storage stakeholders?

Response: Yes. As outlined above, we expect that a decision on the Yucca Mountain application can be reached more quickly than licensing an ISF. Having the certainty of a decision on the proposed repository would greatly aid the decision making of states and other interested entities.

FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS

Congress of the United States
House of Representatives

COMMITTEE ON ENERGY AND COMMERCE
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June 9, 2015

Ms. Josephine Piccone
Director, Yucca Mountain Directorate
Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20852

Dear Ms. Piccone:

Thank you for appearing before the Subcommittee on Environment and the Economy on Friday, May 15, 2015, to testify at the hearing entitled "Update on the Current State of Nuclear Waste Management Policy."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

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Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

John Shimkus
Chairman
Subcommittee on Environment and the Economy

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 26, 2015

The Honorable John Shimkus
Chairman, Subcommittee on Environment and
the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The U.S. Nuclear Regulatory Commission appeared before the Subcommittee on Environment and the Economy on May 15, 2015. Following that hearing, you forwarded questions for the hearing record. The responses to those questions are enclosed. If I can be of further assistance, please do not hesitate to contact me at (301) 415-1776.

Sincerely,

[redacted]

Eugene Dacus, Director
Office of Congressional Affairs

Enclosure:
(As stated)

cc: Representative Paul Tonko

The Honorable John Shimkus

QUESTION 1. **Recently, multiple private companies have announced their intention to pursue an NRC license to serve as a consolidated interim storage site for high-level radioactive waste and commercial spent nuclear fuel. However, we have experience trying to license and operate one of these facilities. Private Fuel Storage, a private company, pursued a storage facility in partnership with an Indian tribe in Utah, but was doomed due to opposition from powerful political forces.**

a) Please describe the PFS experience, including NRC's actions on the license.

ANSWER.

The Private Fuel Storage (PFS) Independent Spent Fuel Storage Installation (ISFSI) application was a first-of-a-kind application and review for the NRC. The State of Utah and others intervened in the proceeding, and numerous issues for hearing (or "contentions") were adjudicated by the Atomic Safety and Licensing Board Panel. The hearing process took a total of seven years, some of which overlapped with the safety review. There were numerous factors that contributed to the length of the hearing process, e.g., the cask system selected by the applicant was not certified at the time the application was submitted; during the application review process the applicant submitted multiple amendments to its application; revisions to the application prompted new hearing rights and, subsequently, new contentions; additional requests for information were required in order to clarify portions of the revised application; and

adjudication of late-filed contentions. As a result of these factors, the application review took nine years, at a cost of approximately $9 million, which included 35 Full Time Equivalents (FTE).

The Commission issued the license to PFS in February 2006. PFS has been unable to construct and operate an ISFSI due to its inability to secure two required approvals from the U.S. Department of the Interior (DOI). The first is a permit to construct a railroad on a right of way through land managed by DOI's Bureau of Land Management; and the second is final approval by DOI's Bureau of Indian Affairs for a proposed lease of tribal lands owned by a Native American Tribe (the Skull Valley Band of Goshute Indians).

b) What did NRC learn from this experience?

ANSWER.

The PFS experience illustrates potential impacts that application quality and an adjudicatory proceeding can have on a licensing schedule. As noted in answer 1.a, PFS was a first-of-a-kind application, and during the review process the applicant submitted multiple revisions to its application, and the NRC staff had several rounds of requests for additional information. In addition, the State of Utah and others strongly opposed the PFS project.

The NRC has recognized the importance of an application that includes sufficient, high-quality information to allow completion of a timely review, as well as the benefits of holding public meetings near the proposed facility site to enhance communication with stakeholders. If there is State, regional, and local support for a project, this can help expedite the licensing proceeding. In addition, since the PFS experience, the NRC has revised its adjudicatory procedural rules so that they are more efficient than the rules in place at the time of the PFS proceeding. Finally, following PFS, the NRC improved its internal review processes in an effort to provide for better internal coordination and to improve the effectiveness and efficiency of the review process.

c) Please describe the process for and timeline that is reasonably expected if another private company applies for an NRC license.

ANSWER.

The NRC staff is available to answer questions about its licensing process through public pre-application meetings with prospective applicants. These meetings are scheduled at the prospective applicant's request. Upon receipt of an application, the NRC staff first does an acceptance review to make sure the application contains sufficient information to complete the safety, environmental, and security reviews. A notice of docketing, notice of proposed action, and opportunity for a hearing is published in the *Federal Register*, and interested persons are able to submit hearing requests and intervention petitions. Notices associated with the staff's environmental evaluation are also published. If the application is accepted for review, the NRC staff begins the safety, environmental, and security reviews of the application to determine whether it meets applicable requirements for spent fuel storage, following the NRC guidance in the "Standard Review Plan for Spent Fuel Dry Storage Facilities." If the NRC determines that all pertinent regulations are satisfied, a license is issued.

Based on lessons learned from the PFS license issued in 2006, the NRC estimates that its safety, security, and environmental reviews will take approximately three years (not including any hearings that may be required). That timeframe depends on the quality of the application. As described above, there is an opportunity for a hearing as part of our licensing process. While the NRC cannot predict how many parties will seek a hearing, how many issues will be admitted for hearing, or how long the hearing process will take, there will be some overlap of the adjudicatory process with the staff's review of the application. Upon receipt of an application, NRC staff are ready to commence review of the application and conduct a hearing, if applicable, as efficiently as possible.

d) What sort of responsibilities would be required of the Federal government?

ANSWER.

As the independent regulator of civilian uses of nuclear materials, the NRC is responsible for the safety, environmental, and security license reviews and oversight to ensure the applicable requirements are satisfied. The NRC's license review determines if the proposed facility meets all the agency's applicable regulatory requirements. The NRC's ongoing oversight ensures that the facility operates in accordance with the NRC's regulations. Actions by other agencies may be required.

e) Who would be required to pay for the costs to acquire a license?

ANSWER.

The applicant would be required to pay for the cost associated with the licensing review.

FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS

Congress of the United States
House of Representatives

COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515–6115
Majority (202) 225-2927
Minority (202) 225-3641

June 9, 2015

The Honorable Greg R. White
Commissioner
Michigan Public Service Commission
P.O. Box 30221
Lansing, MI 48909

Dear Commisioner White:

Thank you for appearing before the Subcommittee on Environment and the Economy on Friday, May 15, 2015, to testify at the hearing entitled "Update on the Current State of Nuclear Waste Management Policy."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Tuesday, June 23, 2015. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515 and e-mailed to Will.Batson@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

John Shimkus
Chairman
Subcommittee on Environment and the Economy

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment

N A R U C

National Association of Regulatory Utility Commissioners

Responses to Questions for the Record
From
Commissioner Greg R. White
On Behalf Of
The National Association of Regulatory Utility Commissioners
For The Hearing Entitled
"Update on the Current State of Nuclear Waste Management Policy"
Held

May 15, 2015

The Honorable John Shimkus

1. **As Congress moves forward to address the logjam associated with nuclear waste management policy, how can we protect the taxpayer to assure that total lifecycle system costs, including transportation, are not increased? What are some key principles to consider?**

Response:

Taxpayer exposure to increased judgment and maintenance costs associated with the federal government's failure to perform its obligations under the Nuclear Waste Policy Act (NWPA) is contingent on the timing of the removal of the high-level nuclear waste from commercial nuclear generator sites. The sooner the government begins to remove that waste, the sooner the ever-expanding taxpayer-funded liability can be limited. Congress should compel the federal government to begin removing high-level nuclear waste from the commercial plant sites as soon as possible.

NARUC's most recent policy document on this question establishes as a first principle that "America needs a permanent solution to Nuclear Waste Disposal and urges Congress to assure "[t]he Administration and the Nuclear Regulatory Commission comply with the law ... approving Yucca Mountain as the repository site by completing the licensing process."[1] *That resolution also outlines a few ideas with obvious positive impact endorsed by experts, including:*

- *Creating a separate organization outside the Department of Energy (DOE) to manage the fund:*

---

[1] ***Resolution Regarding Guiding Principles for Management and Disposal of High-Level Nuclear Waste*** (February 6, 2013).

"Whether DOE was unable to achieve its NWPA responsibilities due to mismanagement or to factors beyond its control can be debated, but the [Blue Ribbon Commission] BRC makes a sound case for creating a new organization, outside DOE, with sole responsibility to manage nuclear waste. NARUC supports this concept, which would require legislation. Id.

- *Finding some mechanism to assure that funds collected for disposal is not diverted to other uses. Id.*

- *Considering – on an interim basis only – some consolidated interim storage. Id.*

"Continued storage at permanently shutdown plants is unacceptable because it imposes costs on ratepayers without equivalent benefits and prohibits economic reuse of the site, whereas, relocation and consolidation would likely reduce the government's liability and improve security. The BRC report cites a study that contends that the savings from consolidated storage for this stranded spent fuel would be enough to pay for the cost of the storage facility."Id.

I have also listed the following additional ideas for protecting taxpayers from increasing total lifecycle system costs, including transportation. NARUC has not taken a specific position on these proposals:

- *Shift the risk for a certain level of cost overruns to entities other than the electric consumer (and funding sources other than the NWF) and/or set up a process for an independent review of cost overruns;*

- *Require a bidding process on government contract work, specifying a certain level of risk for cost overruns to be borne by the contractor;*

- *Minimize the scope of consolidated interim storage to limit duplicative transportation costs: the government should move to consolidated storage (and later to a permanent repository) only the amount of spent nuclear fuel required to minimize taxpayer liability for ongoing maintenance at shuttered sites, or necessary for other emergency or security purposes.*

2. **Currently the Nuclear Waste Fund can only be spent on the repository program. Would NARUC support the use of Nuclear Waste Fund resources to enter into a contract with a private entity for the purpose of consolidated interim storage?**

Response:

As noted in the responses to question 1, NARUC has supported the concept that consolidated interim storage is needed, however, with the caveat that the amount, basis of need, and duration should be determined. Consistent with our general support of the BRC recommendations, using the NWF for consolidated interim storage should be authorized <u>only after careful consideration of the costs and benefits involved.</u>

While NARUC supports some consolidated interim storage, we would not support use of the NWF for consolidated interim storage without certain conditions. First, NWF resources also should be used to advance work on the Yucca Mountain license

application (using the funds responsibly, of course). We would not support restarting collection of the fee, for example, to fund only consolidated storage when permanent disposal is crucial. Second, NWF resources should be limited to fund consolidation of waste generated by shutdown reactors (and perhaps other waste that must be moved based on security or emergency situations). This second condition should be immutable until an independent analysis demonstrates conclusively that movement of additional waste first to consolidated interim storage and later to permanent disposal is cost-effective and otherwise a justified use of funds collected from electric consumers. Third, new legislation should assure full access to the corpus of the NWF for authorized program activities.

A. **If so, how can Congress assure interim storage payments do not impact the long-term adequacy of the Nuclear Waste Fund to support a permanent repository?**

Response:

NARUC is on record supporting a routine systematic evaluation of program needs and NWF resources to fund necessary activities, which would certainly include a permanent repository. While the NWF fee (if collection is restarted) can be adjusted over time to meet program needs, it is best to set the fee at a reasonable level as soon as possible to assure intergenerational equity and avoid future spikes in fees due to foreseeable program cost escalations.

Congress may wish to consider establishing a separate fund (such as the Working Capital Fund model in the Senate bill) that would not be subject to the annual appropriations process. If so, the transfer of future accrued interest on the NWF and one time payments to the new Working Capital Fund might be appropriate. NARUC has not taken a specific position on this last proposal.

B. **If not, what would be the appropriate funding mechanism?**

Response:

N/A

The Nuclear Waste Policy Act codified the principle of "linkage," in which an interim storage facility cannot be licensed prior to the licensing of a permanent repository. This concept assures that interim storage facilities will not become a "de facto" permanent repository. Do you agree with this principle?

Response:

NARUC does not have an official position on the issue of linkage between the development of an interim storage facility and the prior licensing of a permanent

repository. Certainly, no policy maker would want interim storage facilities to become de facto repositories or forestall progress in licensing a permanent repository. We have indicated that progress on a permanent disposal site is crucial and that funds should be authorized for interim storage facilities "only after consideration of the costs and benefits involved."

Although NARUC has a clear position on use of the NWF, our member's views may vary on consent based interim storage negotiations.

In a consent-based siting scenario, potential consolidated storage facility hosts would assess and manage the risks of becoming de facto permanent facilities. Some argue, if a linkage is necessary, it could therefore be determined as part of the negotiations between the parties to the consent agreement. In any new legislation, Congress may also wish to avoid adding requirements that may prove to be unnecessary barriers to negotiations and positive, timely results. Others believe the linkage is a vital protection need to assure that progress is made on a permanent disposal site.

A. **As noted, the current law prohibits the license of an interim site until a repository is licensed. Do you have additional suggestions as to how this process could be modified to provide for concurrent development as part of a nuclear waste management system?**

Response:

As noted earlier, NARUC hasn't taken a specific position on this issue. However, one possibility is to link work on an interim site to progress on the Yucca Mountain license review, e.g., both DOE and the NRC continuing their duties hitting milestones to complete the Yucca Mountain license application review, including seeking annual appropriations and performing activities in a timely and purposeful manner, subject to Congressional oversight and perhaps some independent audit of their activities.

B. **What sort of stipulations would be required to assure a permanent repository would be constructed? For example, do you support a maximum capacity limit on a consolidated interim storage site?**

Response:

While NARUC has cautioned that the amount, basis of need, and duration for consolidated interim storage should be determined, we are also somewhat hesitant to suggest particular constraints on a site's flexibility to serve the nation's future consolidated interim storage needs.

While NARUC has not adopted specific positions on these issues, Congress might wish to consider establishing a maximum capacity limit on a consolidated interim storage site that could be revisited upon submission of an independent analysis (demonstrating efficiency and clear cost savings) to support lifting such a cap. This mechanism may be

useful to better manage use of the NWF or other funding source. While not suggesting a particular limit, NARUC has supported the idea that a consolidated storage site should be authorized to accept at least the current amount of spent fuel from shutdown reactor sites. I believe some additional capacity "buffer" could also prove valuable to provide flexibility to accept spent fuel from future shutdown reactor sites as well as any spent fuel at commercial sites that must be removed due to security or emergency situations.

C. **Do you support economic benefits and incentives for states and communities that offer to host an interim storage site?**

Response:

Yes, within reason, and we likewise have generally supported economic benefits and incentives for States and communities that host a permanent repository (including at Yucca Mountain).

4. **The Eddy Lea Energy Alliance recently proposed constructing an interim storage facility in Southeastern New Mexico. New Mexico Senator Martin Heinrich said, "I cannot support establishing an interim storage facility until we are sure that there will be a path forward to permanent disposal."**

A. **Is the lack of progress on Yucca Mountain hampering our ability to move forward on interim storage?**

Response:

It would appear that it at least is hampering the ability to site an interim storage facility in the State of New Mexico that is consent-based (if consent is defined to require consent by the state's US Senators in addition to the consent of the local community and perhaps state government and tribal government authorities). At the same time, the lack of progress on Yucca Mountain or any other permanent solution to the commercial nuclear waste disposal problem is also a driver of calls for consolidated interim storage – at least with respect to the shutdown reactors – by our organization and others.

B. **Would an expeditious review of the Yucca License application provide more certainty for interim storage stakeholders?**

Response:

Absolutely. Continuing the review process will make it easier to find States willing to host an interim repository.

5. **The DC Court of Appeals ruled that the collection of the Nuclear Waste Fund fee is illegal following DOE's dismantlement of a nuclear waste management program. What steps would need to happen for NARUC to support restarting collection of the fee?**

Response:

NARUC, as the organization with the most direct fiduciary responsibility for electricity ratepayer/consumer payments into the NWF, logically should be a key participant in any negotiations to restart collections of a NWF fee. NARUC has not specifically addressed this question by resolution. However, based on existing NARUC positions, I suspect the association's pre-requisites for re-initiating the fee, will include requiring the federal government to fully restart the Yucca Mountain license application review and assuring both the NRC and DOE (or statutorily authorized successor agency) fulfill their designated roles in good faith. The federal government should also begin reconstituting OCRWM per the NWPA and Congress should pass a law that includes the Blue Ribbon Commission's-recommended escrow approach to stop further misuse of NWF monies and assure stable funding for the program. In a letter to the President before their January 2012 report, which contained the same recommendation, the BRC Co-Chairs delineated near-term steps to protect future payments by electric consumers. They called for only those fee collections matching Congress' annual appropriations to the nuclear waste program to be deposited into the NWF, with any excess to be held in escrow until needed to fund future appropriations to the program. Unfortunately, those recommendations have not been pursued.

6. **Since its inception, the Nuclear Waste fee has been set at one mil, or one tenth of a penny, per kilowatt hour of electricity generated from nuclear energy. This has funded the ratepayer's contribution to Yucca Mountain to-date, with $33 billion in the Nuclear Waste Fund administered by the Treasury Department. As Congress considers legislation relating to our nuclear waste management system, it is important to have the funding for the program align with the corresponding activities. How can Congress assure that the Nuclear Waste fee adequately provides for a repository program, while not imposing additional costs on electric consumers?**

Response:

It is critical that the current funding mechanism be modified so that NWF fee collections can no longer be used to offset other unrelated federal government obligations. If the nuclear waste program has full access to the funds previously collected (the corpus) as well as future collections if the fee is restarted, that will go a long way toward meeting future program needs. As stated previously, there will still be a need for regular evaluation of program requirements, which would certainly include a permanent repository, as well as NWF resources to fund program activities. While the NWF fee (if collection is restarted) can be adjusted to meet program needs, it is best to set the fee at a reasonable level quickly to assure intergenerational equity and avoid future fee spikes due to program cost escalation. Since there is no real federal program, there is no logical basis for recommending any specific fee amount at this time. Certainly, there is no justification for re-initiating the fee at any level in excess of the initial one-mill fee specified by Congress.

FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON ENERGY AND COMMERCE

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Minority (202) 225–3641

June 9, 2015

Mr. Stephen Kuczynski
Chairman, President, and CEO
Southern Nuclear Operating Company
40 Inverness Center Parkway
Birmingham, AL 35242

Dear Mr. Kuczynski:

Thank you for appearing before the Subcommittee on Environment and the Economy on Friday, May 15, 2015, to testify at the hearing entitled "Update on the Current State of Nuclear Waste Management Policy."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Tuesday, June 23, 2015. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515 and e-mailed to Will.Batson@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

John Shimkus
Chairman
Subcommittee on Environment and the Economy

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment

Stephen E. Kuczynski
Chairman, President and
Chief Executive Officer

Southern Nuclear
Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, Alabama 35201

Tel 205.992.6809
Fax 205.992.5969

June 23, 2015

VIA HAND DELIVERY & E-MAIL (Will.Batson@mail.house.gov)

ATTN: Will Batson, Legislative Clerk, Committee on Energy and Commerce

The Honorable John Shimkus
Chairman, Subcommittee on Environment and the Economy
U.S. House of Representatives
2125 Rayburn House Office Building
Washington DC 20515

Re: May 15, 2015 Hearing Entitled, "Update on the Current State of Nuclear Waste Management Policy"

Dear Chairman Shimkus:

I was honored to appear before your Subcommittee last month to offer testimony on behalf of Southern Nuclear Operating Company about nuclear waste policy in the United States. Thank you for graciously allowing me the opportunity to present my views on this important area of federal law and policy. Enclosed with this letter are my responses to the additional questions for the record that you provided to me by letter dated June 9, 2015.

Again, thank you for the invitation to participate in the hearing and for your honorable service to our nation.

Sincerely,

Stephen E. Kuczynski

Enclosure

Additional Questions for the Record

Submitted to Stephen E. Kuczynski, Chairman, President and Chief Executive Officer, Southern Nuclear Operating Company, Inc., in relation to the May 15, 2015 Hearing Before the House of Representatives Committee on Energy & Commerce, Subcommittee on Environment & the Economy

Questions from the Honorable John Shimkus

1. **There are currently numerous sites throughout the country which store commercial spent nuclear fuel from shutdown nuclear reactors at just an Independent Spent Fuel Storage Installation (ISFSI). Additionally, there are additional reactor sites which are going through the decommissioning process with more units shutting down in the coming years.**

A. How can Congress create a structure to assure these sites can be redeveloped and save taxpayer funding, while treating all spent nuclear fuel in an equitable fashion?

While none of our company's nuclear power plants have been permanently shutdown or decommissioned, and as a result, we have not personally addressed the scenario raised in this question, I have experience with the regulatory structure for decommissioning nuclear reactors and implications for spent nuclear fuel at these sites.

At the outset, I would emphasize that the current NRC regulatory program provides flexibility to safely and efficiently decommission nuclear reactors. In general, the NRC regulations currently allow nuclear power plants to undertake two approaches to decommissioning their facilities: (1) SAFSTOR, also known as "Safe Storage," where a nuclear plant and its main components remain in place until the plant operator selects to transition to full decontamination and closure of the site and all fuel is removed from the reactors and stored safely on site; and (2) DECON, also known as "Decontamination," where the operator removes all of the equipment and materials and proceeds with decontamination and closure of the site in a much shorter time frame. Both approaches have their advantages, but it is important for the program to maintain flexibility which helps to reduce the costs associated with decommissioning. Existing regulations also ensure adequate funding to complete the cleanup and decontamination process safely, completely and efficiently. As NEI has explained: "The nuclear energy industry has proven that it has the technology, resources and expertise to successfully decommission commercial nuclear reactors. A 2013 NRC report found that commercial reactor operators have adequate funds for decommissioning their facilities and that the agency's formula that determines the 'minimum amount of required funding assurance' yields sound results. The decommissioning process is accomplished in a safe, secure and environmentally friendly manner."[1]

[1] NEI Fact Sheet, Decommissioning Nuclear Power Plants, available at http://www.nei.org/master-document-folder/backgrounders/fact-sheets/decommissioning-nuclear-energy-facilities (last updated August 2014).

Another point to emphasize is that, due to the federal government's ongoing non-compliance with the Nuclear Waste Policy Act (NWPA), spent nuclear fuel is being kept onsite for much longer than the law originally intended. This is true for both operating reactors and decommissioned plants. However, we are concerned about proposals that would require DOE to remove SNF from decommissioned plants before operating plants or otherwise alter the current contractually established priority system for removal of spent fuel. In our view, equitable treatment of SNF removal is accomplished under the existing DOE contracts. In other words, the fair way to address these issues is to ensure that DOE honors the current SNF queue and contractual provisions. To the extent changes in the SNF acceptance priorities are necessary to expedite removal from shutdown plants, existing law and contracts already allow exchanges among SNF contract holders. SNF holders can engage in exchange of acceptance allocations with one another to facilitate removal of SNF at decommissioned plants earlier than would be the case under the oldest fuel first priority, and DOE has authority to support and facilitate these exchanges. In fact, in at least one of the breach of contract cases, the court credited evidence that, in a non-breach world, "exchanges would have occurred at some point, and in some fashion."

B. What are the proper potential mechanisms to address stranded sites?

In the nuclear context, the term "stranded sites" has come to refer to nuclear power plant sites that have been permanently shutdown but continue to store spent nuclear fuel. Continued fuel storage at these decommissioned sites imposes increased costs on the site owners/operators as they are forced to build and maintain on-site fuel storage. It also delays eventual use of the site for other purposes. We applaud the Subcommittee for looking at this issue, and believe steps can be taken to help address these challenges. In our view, the primary mechanism to address these concerns is to bring the federal government into compliance with the Nuclear Waste Policy Act, which will ensure that spent fuel is removed from all nuclear sites at the earliest possible opportunity consistent with existing DOE contracts and spent fuel removal prioritization. The exchange mechanism described above would allow accelerated removal of spent fuel from stranded sites.

My written testimony noted that, as a general matter, we support a long-term centralized storage solution. Further, we believe it would be appropriate to site such a facility at Yucca Mountain, either as part of an initial repository license or in a separate facility. We are not opposed to additional storage sites (including interim storage sites), but we continue to support the principle—embodied in the existing NWPA—that the Nuclear Waste Fund (NWF) may be used to fund interim storage sites only after a permanent repository is licensed. Moreover, if an interim storage site is established, the federal government should be required to take permanent title to the spent nuclear fuel at the time of removal from the owner/operator's site.

2. As Congress moves forward to address the logjam associated with nuclear waste management policy, how can we protect the taxpayer to assure that total lifecycle system costs, including transportation, are not increased? What are some key principles to consider?

The ongoing failure of the federal government to comply with the Nuclear Waste Policy Act has created an enormous queue of facilities awaiting removal of spent nuclear fuel. Importantly, the existing contracts between the federal government and the nuclear companies establish a spent fuel prioritization system that will allow for the timely, systematic, and appropriate removal of spent fuel if and when the federal government complies with the law. Delays in compliance are clearly increasing costs for all involved. Thus, the first way to protect the taxpayer and electricity customers is to bring the federal government into compliance with the NWPA by completing the Yucca licensing process and establishing an operational repository. In this regard, completing the Yucca repository is clearly the most cost efficient approach. According to a recent GAO report, the Yucca repository could be completed in 15 years while interim sites would take at least 20 years and a different permanent repository would take at least 40 years.[2] Completing the Yucca repository would also eliminate the additional costs imposed on nuclear power plants associated with the temporary on-site storage of spent nuclear fuel. Continued delay only increases the cost to the government of repository development and on site storage liability.

As your question suggests, another way to minimize costs and protect the taxpayer is to limit transportation costs associated with the removal and relocation of spent nuclear fuel. Transportation efficiency is one reason why I believe an interim storage facility at Yucca Mountain would make more sense than establishing an interim storage facility at other locations. Of course, no other transportation costs would need to be incurred for spent nuclear fuel that is permanently stored at Yucca Mountain.

Governmental efficiencies could also help, which is one reason why we are opposed to de-linking permanent disposal of civilian and defense-related nuclear waste. We support the decision in 1985 to establish a permanent repository for both civilian and defense nuclear waste. This would seem to be the most efficient approach. We would encourage this Subcommittee to fully vet any de-linking proposals to ensure that it advances the objective of establishing an operational permanent repository for civilian nuclear waste and brings the country into compliance with the existing spent fuel contracts and the Nuclear Waste Policy Act. Other ways to improve efficiencies in the repository siting process could include streamlining the NEPA environmental review process for interim storage sites and the supplemental reports required for the Yucca repository.

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[2] *See* U.S. GOV'T ACCOUNTABILITY OFFICE, REP. NO. GAO/RCED-15-141, SPENT NUCLEAR FUEL MANAGEMENT: OUTREACH NEEDED TO HELP GAIN PUBLIC ACCEPTANCE FOR FEDERAL ACTIVITIES THAT ADDRESS LIABILITY, at 16 (2014).

3. The Eddy Lea Energy Alliance recently proposed constructing an interim storage facility in Southeastern New Mexico. New Mexico Senator Martin Heinrich said, "I cannot support establishing an interim storage facility until we are sure that there will be a path forward to permanent disposal."

A. Is the lack of progress on Yucca Mountain hampering our ability to move forward on interim storage?

Yes, the lack of progress on a permanent repository at Yucca Mountain is, as a practical and legal matter, hindering interim storage. As a practical matter, potential host sites for interim storage are concerned about allowing spent fuel to be moved to their communities until they have assurances that a permanent repository will be operational. And, as a legal matter, the NWPA already provides that the NWF may be used to fund interim storage sites only after a permanent repository is licensed. As your Subcommittee considers this issue, we would encourage you to ensure that any legislation addressing these matters keeps this important principle in place.

B. Would an expeditious review of the Yucca License application provide more certainty for interim storage stakeholders?

Yes, approval of the Yucca license would provide more certainty for those pursuing interim storage solutions. Completion of the Yucca licensing process would be a significant step forward in complying with the NWPA. All nuclear fuel stakeholders, including those interested in promoting interim storage, would benefit from the completion of the Yucca license process. We would support ways to ensure that the Yucca license process is completed in as timely a manner as possible. Legislation addressing the land and water rights necessary for the Yucca repository would be one way to facilitate completion of the Yucca license, as would measures aimed at facilitating completion of any necessary environmental reports. Of course, now that it has been more than seven years since the Yucca license application was filed, the current review process has clearly not been expeditious.

4. Since its inception, the Nuclear Waste fee has been set at one mil, or one tenth of a penny, per kilowatt hour of electricity generated from nuclear energy. This has funded the ratepayer's contribution to Yucca Mountain to-date, with $33 billion in the NWF administered by the Treasury Department. As Congress considers legislation relating to our nuclear waste management system, it is important to have the funding for the program align with the corresponding activities. How can Congress assure that the Nuclear Waste fee adequately provides for a repository program, while not imposing additional costs on electric consumers?

As this Subcommittee takes a close look at the fee and its appropriate uses, I would highlight several issues for your consideration.

First, collection of the fee should be restored only after the federal government comes into compliance with the NWPA. The D.C. Circuit recently ordered DOE to cease collecting the 1.0 mil annual fee, and in response, DOE set the fee to zero effective May 16, 2014. My

understanding of the court decision is that the nuclear waste fee cannot be reinstated until DOE proposes a rate that it can demonstrate is commensurate with DOE's activities toward developing a permanent waste removal and disposal solution. Given that Yucca Mountain has been statutorily designated as the site of the permanent repository, a viable plan and demonstrable progress for the licensing and development of the repository there would seem to be prerequisite to any reinstatement of the fee. This is primarily a question for the federal courts to resolve, although Congress could certainly address the issue via legislation.

Second, the existing fund balance, which currently exceeds $30 billion, should be drawn down significantly before the fee is reinstated. It would be inappropriate to begin collecting fees when the current balance is more than adequate to cover likely costs over the near-term.

Third, we believe Congress can protect electricity customers by limiting nuclear waste fee dollars to the sole purpose of removal and disposal of SNF. Congress should protect against efforts to divert NWF fee dollars to unrelated purposes and provide access to those funds to the repository program. But we are not absolutely opposed to allowing some appropriate new uses of the NWF. For example, it may be appropriate for Congress to use NWF dollars to support creation of a federal corporation with responsibility for SNF storage and disposal, consistent with the recommendation of the Blue Ribbon Commission. This new corporation should have access to the NWF without the need for further congressional appropriations, although subject to ongoing congressional oversight and in a manner consistent with the existing NWPA. Likewise, it could be appropriate to use NWF dollars to support enhanced incentives for the State of Nevada. This is an area of opportunity, as noted in a recent editorial by Nevada Congressman Crescent Hardy and a separate editorial by Chairman Shimkus. We would support reasonable incentives for the State of Nevada to help facilitate completion of Yucca Mountain and to compensate the state for costs it incurs on the basis of hosting this site. Regarding funds for those incentives, if reasonable in scope and tied directly to facilitating construction and operation of a permanent repository, we would support using funds from the NWF for those purposes.

Finally, we strongly believe in the need to reform the funding process to ensure available access to the NWF for appropriate uses and in an efficient, reliable manner.

FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS

Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
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Minority (202) 225-3641

June 9, 2015

Mr. Einar Ronningen
Manager
Rancho Seco Assets
14440 Twin Cities Road
MS N493
Herald, CA 95638

Dear Mr. Ronningen:

Thank you for appearing before the Subcommittee on Environment and the Economy on Friday, May 15, 2015, to testify at the hearing entitled "Update on the Current State of Nuclear Waste Management Policy."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

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Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

John Shimkus
Chairman
Subcommittee on Environment and the Economy

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment and the Economy

Attachment

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SMUD®

June 23, 2015
DPG 15-174

Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

Attention: John Shimkus, Chairman

RESPONSE TO ENERGY AND COMMERCE, SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY MEMBER QUESTIONS

Dear Chairman Shimkus,

Attached please find responses to the questions submitted for the record following the hearing entitled "Update on the Current State of Nuclear Waste Management Policy".

For myself, and on behalf of the Sacramento Utility District (SMUD) and the Decommissioning Plant Coalition, thank you for the opportunity to provide testimony to you and the members of the Subcommittee on this important topic.

SMUD and the Decommissioning Plant Coalition would be happy to provide additional information from our perspective, should you or other members of the Subcommittee wish more information in the future.

Sincerely,

[redacted]

Einar T. Ronningen
Manager, Rancho Seco Assets

(ETG/BG)
Enclosure
CC: DPC

[redacted]

Response of Einar Ronningen
On Behalf of Decommissioning Plant Coalition
Additional Questions for the Record
May 15, 2015 Hearing
Before the Subcommittee on Environment and the Economy
"Update on the Current State of Nuclear Waste Management Policy"

Questions from The Honorable John Shimkus

1. There are currently numerous sites throughout the country which store commercial spent nuclear fuel from shutdown nuclear reactors at just an Independent Spent Fuel Storage Installation (ISFSI). Additionally, there are additional reactor sites which are going through the decommissioning process with more units shutting down in coming years.

A. How can Congress create a structure to assure these sites can be redeveloped and save taxpayer funding, while treating all spent nuclear fuel in an equitable fashion?

Response: In order for the sites of permanently shutdown reactors to be made available for unrestricted use and redevelopment, the stranded used nuclear fuel (and Greater-Than-Class-C (GTCC) waste at certain sites) needs to be removed as stipulated in the contracts between the owners of those facilities and the federal government. We believe there is a general consensus that the nuclear waste disposal program should focus on consolidating the material now present at shutdown sites across the country, recognizing that doing so will go a significant way towards alleviating taxpayer liabilities for damage payments from the federal Judgment Fund (now in excess of $21 billion) and demonstrate the capability of the federal government to meet its obligations to safely manage this material – something important from the standpoint of current and future generations' confidence in the use of nuclear energy for the production of electricity.

As mentioned in the following response, the Nuclear Waste Policy Act recognizes stranded fuel priority as equitable.

B. What are the proper potential mechanisms to address stranded sites?

Response:

The Department of Energy (DOE) currently has the authority it needs under the Nuclear Waste Policy Act of 1982, as amended, and the Standard Contract, to ensure that the necessary priority attention is given to the permanently shutdown plants. What DOE needs is direction to develop an interim consolidated storage program in parallel with progress towards an operational repository, as called for in the report of the Blue Ribbon Commission on America's Nuclear Future. The DPC, which actively participated in the hearings held by the BRC, endorses that element of the final report.

2. As Congress moves forward to address the logjam associated with nuclear waste management policy, how can we protect the taxpayer to assure that total lifecycle system costs, including transportation, are not increased? What are some key principles to consider?

Response:

Empirically, taxpayers have been penalized billions of dollars because of the continued storage of used nuclear fuel at former power reactor sites as a consequence of lack of progress under the Nuclear Waste Policy Act, as amended. This unnecessary cost can be eliminated without further consequence to the taxpayer through legislative action supporting the development of consolidated interim storage of used nuclear fuel while the Congress works in parallel towards an operational geologic repository at Yucca Mountain (or other agreed-upon location).

It should be evident that the cost of developing a transportation infrastructure capable of supporting the disposition of the nation's current and projected inventory of stored nuclear fuel is fundamental to any solution (be it temporary placement into consolidated interim storage or a one-time transport to a repository). The development of a consolidated interim storage facility and continued oversight of the material until it is moved to a geologic repository can be funded from within the interest generated by the Nuclear Waste Fund without impacting the availability of funds for development and operation of a geologic repository.

Compare this "no cost to the taxpayer" option with the billions of dollars in unnecessary penalties taxpayers are bearing because the federal government has yet to take possession of any used nuclear fuel and let the economic impact to the taxpayer drive the discussion.

3. Two private companies announced their intention to pursue an NRC license to serve as a consolidated interim storage site. However, as you know, Private Fuel Storage (PFS) pursued, and received, an NRC license for this purpose, and they are now releasing the license. What differentiates the recent announcements from the PFS experience?

Response:

The PFS effort, begun at a time when DOE was delayed, but not yet determined by the courts to be in partial default of its contractual obligations to utilities, was designed to provide a "pressure release valve" for those utilities that had not yet had to make a resource commitment to construct and operate on-site dry cask storage, or those that had, but were coping with state and/or local opposition to such. It is our understanding that contract holders would retain title to the material shipped to the PFS facility, or would be transferred to the PFS operators, until such time as DOE accepted the material for disposal. In addition, state officials in Utah opposed the PFS license application, although

it was consented to by the Goshute Tribe on whose land the facility would have been located.

Almost 20 years later, the situation has dramatically changed. DOE has been found in partial default of its contractual obligations and utilities, not without the expenditure of legal resources in some cases, are now receiving damages from the government (paid for by taxpayers out of the Judgment Fund).

As we understand the two recent proposals, private entities are proposing to construct storage facilities licensed by the NRC and anticipate that DOE would perform under its contract with utilities, beginning in the first instance with those contract holders of shutdown sites who are storing used nuclear fuel and GTCC waste by accepting title to the material and shipping that material to the site(s) as the customer. In addition, we understand that both efforts have received support from both their state and local stakeholders.

4. The Eddy Lea Energy Alliance recently proposed constructing an interim storage facility in Southeastern New Mexico. New Mexico Senator Martin Heinrich said, "I cannot support establishing an interim storage facility until we are sure that there will be a path forward to permanent disposal."

A. Is the lack of progress on Yucca Mountain hampering our ability to move forward on interim storage?

Response: We believe that the issue of linkage between progress on Yucca Mountain and any other repository site and interim storage is a question that should be left to the potential host state and local community. We note that the linkage in current law between the licensing of Yucca Mountain and storage is one reason why storage capacity does not yet exist.

B. Would an expeditious review of the Yucca License application provide more certainty for interim storage stakeholders?

Response: As noted above, the matter of the linkage between the Yucca Mountain license application and interim storage is best handled as a matter between the potential hosts of the interim storage facility and the federal government. As such, there are likely differing views that would emerge from differing stakeholders. However, to address concerns, such as Senator Heinrich's, we support a strong permanent disposal program and continuation of the Yucca Mountain licensing process.