

Testimony of Steven P. Nesbit¹ before the House of Representatives
Committee on Energy and Commerce's Subcommittee on Environment
on the Subject of the Nuclear Waste Policy Amendments Act of 2017

April 26, 2017

Summary

Mark Twain famously said, "Everybody talks about the weather, but no one does anything about it." Used nuclear fuel and high-level radioactive waste (HLW) management is in real danger of replacing the weather in that quote. Fortunately, both the new administration and Congress appear to be ready to take on this important issue and put it back on the right track.

Action is sorely needed. In the short term, Congress should appropriate money to complete the Yucca Mountain licensing process and the Department of Energy (DOE) should re-establish the Office of Civilian Radioactive Waste Management (OCRWM) to carry out the program to store, transport and dispose of used nuclear fuel and HLW.

Beyond these immediate actions that require no authorizing legislation, Congress should enact reforms to the country's HLW management framework. The United States Nuclear Infrastructure Council (USNIC) proposed six key elements for a rejuvenated program: (1) developing the Yucca Mountain geologic repository, (2) initiating a consolidated interim storage program, (3) addressing management and funding reform, (4) providing value for host communities, (5) preparing for transportation and (6) carrying out appropriate research and development. Most of these elements are captured in the discussion draft of the Nuclear Waste

¹ I am giving this testimony on the behalf of the United States Nuclear Infrastructure Council, for which I serve as chair of the Back-end Working Group. I am an employee of Duke Energy Corporation.

Policy Amendments Act of 2017, and I look forward to a thorough dialog on this important legislation.

Written Statement

Chairman Shimkus, Ranking Member Tonko, and members of the subcommittee, on behalf of the U.S. Nuclear Infrastructure Council (USNIC), I thank you for the opportunity to appear and offer testimony on the discussion draft of the Nuclear Waste Policy Amendments Act of 2017. USNIC is the leading U.S. business consortium advocate for nuclear energy and promotion of the American supply chain globally. My employer, Duke Energy Corporation, is the second largest operator of nuclear power plants in the United States and is a long-standing member of USNIC. My personal experience in the field of used fuel dates back to 1992 when I worked several years for the management and operating contractor for the DOE's OCRWM in Las Vegas, Nevada, in support of the Yucca Mountain Project. I later supported OCRWM's design of a generic centralized interim storage facility for used nuclear fuel. In 2006 and 2007, I directed used fuel management activities for Duke Energy, and since 2009, as the Director of Nuclear Policy and Support, I have represented Duke Energy on several organizations, including USNIC, the Nuclear Waste Strategy Coalition and the Nuclear Energy Institute, that are heavily engaged in used fuel policy issues. I also chair the American Nuclear Society Public Policy Committee, which is responsible for the nuclear professional society's position statements on used fuel and other matters of nuclear policy.

I appear before you today discouraged by the country's lack of accomplishments in the area of used fuel management over the past three and a half decades, but encouraged by the opportunity to make real and lasting progress over the coming months and years.

Let me start by emphasizing the urgent need to successfully manage the back end of the nuclear fuel cycle in this country. It has been more than 34 years since enactment of the Nuclear Waste Policy Act (NWPA); more than 19 years since the federal government failed to meet its

statutory and contractual obligation to begin removing used fuel from nuclear power reactor sites; more than eight years since DOE submitted the Yucca Mountain license application to the U.S. Nuclear Regulatory Commission (NRC) for review; and more than seven years since the previous administration defunded the repository program and vacated OCRWM. This impasse is costing U.S. taxpayers billions of dollars. As of September 30, 2016, the government had paid \$6.1 billion in damages as a result of lawsuits and settlements, and the current government estimate of remaining federal liabilities is approximately \$25 billion² (based on arguably optimistic assumptions about when DOE will begin to remove used fuel from reactor sites).

In addition to these mounting costs, failure to bring closure to the back end of the nuclear fuel cycle adversely impacts nuclear energy as a vital component for reliable, affordable and clean electricity – and energy independence, jobs, exports and competitiveness. Some members of Congress have balked at funding new nuclear technology development based on the lack of a disposal pathway for used fuel. After the U.S. Court of Appeals struck down its Waste Confidence Rule, the NRC placed a two-year moratorium on issuing new nuclear plant licenses and license renewals. A number of states have a ban or restrictions on the construction of new nuclear energy facilities in large part due to the lack of a disposition pathway for used fuel. Globally, as noted by the Blue Ribbon Commission on America's Nuclear Future, the continued stalemate is damaging America's international standing on issues of nuclear safety, nonproliferation and security.

Speaking from the standpoint of my employer, Duke Energy Corporation, nuclear power has been a remarkable success story for our customers in North Carolina and South Carolina. We operate 11 nuclear power reactors in these states, with a total generating capacity of 10,719

² OAI-FS-17-04, "Department of Energy Nuclear Waste Fund's Fiscal Year 2016 Financial Statement Audit," Note 9, DOE Office of the Inspector General, December 2016.

megawatts-electric. These 11 reactors typically generate half of the electricity we provide to customers in the two Carolinas, reliably, economically and with minimal environmental impacts. We also maintain the permanently shut down Crystal River nuclear power reactor in Florida that served customers more than 30 years.

Used fuel management, however, continues to be a costly and time-consuming burden for Duke Energy and other utilities. Nuclear power reactors typically shut down for refueling every one and a half to two years, and at that time used fuel assemblies are discharged for on-site storage. Initially, the used fuel is stored in on-site pools, and when the pools approach capacity, some of the fuel assemblies are transferred to on-site dry storage. Duke Energy stores more than 8,000 metric tons of used fuel, with more than 15,000 used fuel assemblies in pool storage and more than 8,000 assemblies in dry storage. The company has six independent used fuel storage installations (ISFSIs), including one under development at Crystal River. More than 280 used fuel storage casks or canisters reside at these ISFSIs. In addition, in the 1970s through the 2000s, Duke Energy transported more than 5,000 used fuel assemblies from plant to plant, often across state lines, to address a lack of storage space in the used fuel pools at our older plants. With respect to the industry as a whole, at the end of 2016, there were more than 78,000 metric tons of commercial used nuclear fuel in storage (nearly 49,000 metric tons in pool storage and nearly 30,000 metric tons in dry storage). This corresponds to more than 275,000 used nuclear fuel assemblies in storage (more than 172,000 in pools and more than 103,000 in dry storage). There are 74 nuclear plant sites storing used fuel, of which 15 have no operating nuclear power reactors.

While nuclear power plants store used fuel safely and securely, extensive on-site storage of used fuel is a distraction from the plants' primary mission of producing electricity. Indefinite,

large scale on-site storage was not a choice Duke Energy wanted to make and it is not a permanent solution for used fuel. In accordance with contracts signed pursuant to the NWPA, Duke Energy and its predecessor companies have collected from their customers and paid more than \$2.5 billion³ into the Nuclear Waste Fund since 1983. However, the federal government missed its 1998 deadline to begin removing used fuel from reactor sites, and still has not begun to fulfill its statutory and contractual responsibilities under the NWPA. For some of our plants Duke Energy successfully sued the federal government on multiple occasions for partial breach of contract and was awarded damage payments by the courts. For the other plants Duke Energy entered into a settlement agreement under which it receives damage payments annually. To date, the federal government has reimbursed Duke Energy more than \$400 million for used fuel storage costs that would not have been incurred had the government managed used fuel as agreed in its contracts. This story is repeated at nuclear power plants around the country, including a number of utilities maintaining shutdown sites like Crystal River. As noted earlier, as of September 30, 2016, the federal government had paid \$6.1 billion in compensation for damages. It is clear that productive action on used fuel is long overdue. There is an imperative need for this country to effectively manage its commercial used fuel, and the centerpiece of this program must be the development of a geologic repository to enable ultimate disposal of the material.

Next, I would like to summarize the recommendations of USNIC for breaking the used fuel logjam. USNIC developed the issue brief “Charting a Path Forward” in February 2016 and revised and updated the document in March 2017, stating that “Urgent action by the Congress, the Trump Administration and the U.S. Department of Energy (DOE) under Energy Secretary Rick Perry is required to re-establish the basic foundational elements of a comprehensive

³ This amount does not include interest.

program for used nuclear fuel and high-level waste storage and disposal.” A copy of the USNIC issue brief is attached to my testimony.

The issue brief describes six key elements: (1) developing the Yucca Mountain geologic repository, (2) initiating a consolidated interim storage program, (3) addressing management and funding reform, (4) providing value for host communities, (5) preparing for transportation and (6) carrying out appropriate research and development. In particular, USNIC believes the government must carry out its mandate under the NWPA and complete the initial licensing process for a geologic repository at Yucca Mountain, Nevada. Yucca Mountain is located in a remote, arid region of the country on federally owned land, and its suitability for disposal of used fuel has been confirmed by decades of scientific study involving the nation’s national laboratories and, most recently, a favorable safety evaluation by the NRC⁴. The evaluation found the repository capable of meeting stringent Environmental Protection Agency (EPA) requirements for waste isolation for at least 1 million years. Yucca Mountain site characterization and licensing have been carried out at considerable expense to electricity customers and taxpayers, and the directly affected unit of local government, Nye County, Nevada, supports the development of a repository at the site provided it meets applicable public health and safety standards. It is time to follow the law and finish the job.

USNIC applauds the discussion draft of the Nuclear Waste Policy Amendments Act of 2017 as a significant positive step toward a more effective and sustainable used fuel management program for the country. The draft legislation addresses many of the elements identified by USNIC in its issue brief. Importantly, the draft legislation would provide a statutory basis for desirable changes to the program, rather than attempting to make such fundamental changes

⁴ The NRC is the country’s independent agency charged with the protection of public health and safety in matters related to nuclear materials and radiation.

pursuant to executive branch whim. Below I highlight what USNIC sees as some of the key points in the discussion draft.

First, the draft legislation provides for necessary federal actions to support the development of Yucca Mountain as a repository for used nuclear fuel and HLW. These actions, such as land withdrawal and ensuring water rights, are consistent with the intent of the Nuclear Waste Policy Act and necessary for the completion of the initial licensing process.

Second, the draft legislation would encourage a dialog with the State of Nevada and its citizens about impact assistance and benefits that might be made available in return for hosting a geologic repository. USNIC believes Yucca Mountain should ultimately be a “win” for both Nevada and the nation, but this will only happen if a constructive dialog occurs.

Third, the draft legislation provides a legal framework for a consolidated interim storage program for used nuclear fuel that includes the ability to contract with private entities aligned with communities amenable to hosting an interim storage site. USNIC believes this kind of cooperative venture offers the best pathway for successful implementation of a consolidated storage program. USNIC shares the position of most organizations that the consolidated interim storage program should be focused first on removal of used fuel from shutdown plant sites with no operating reactor.

In addition, the draft legislation addresses funding reform, perhaps the most challenging aspect of this issue facing the federal government. Ultimately, the entity responsible for managing used fuel and HLW must have access to the resources necessary to perform the job. Because of complex accounting constraints, there are major obstacles to accessing the considerable balance in the Nuclear Waste Fund. These obstacles must be overcome. Nuclear power plant operators, like Duke Energy, have a simple view – electric customers and nuclear

operating companies paid the government a significant amount of money for a service, and they should expect to get that service without having to pay two or three more times for the same thing. This viewpoint is shared by many state regulators, consumer advocates, and other public and private stakeholders with whom I have had the opportunity to work on used fuel issues. The draft legislation establishes a framework for accessing the existing balance in the fund, as well as preserving future assessments, if any, for the purpose for which they were collected. USNIC is concerned because annual appropriations in the past have not proven to be a reliable mechanism for funding the HLW program. There will undoubtedly be considerable dialog on the appropriate mechanism and associated funding controls.

Finally, the draft legislation would re-establish OCRWM within DOE as the entity responsible for carrying out the government's responsibilities related to used fuel management, and would modify the NWPA so that the OCRWM director would have a five-year term and would be required to have project management qualifications to fill the position. USNIC endorses the re-establishment of OCRWM in the near-term, and concurs that qualified, effective and stable leadership is an absolute requirement for program success. OCRWM's accomplishments in the 2000s under the leadership of Ward Sproat underscore this point. Ultimately, a separate, politically independent, but accountable, federal corporation-type organization⁵ to carry out this important, long-term national mission in a sustainable manner may be warranted.

I would be remiss not to mention a couple of other attributes of the discussion draft which, though perhaps not as significant as the ones highlighted above, would, if enacted, make a positive contribution to the country's framework for used fuel and HLW management. The

⁵ Legislation along those lines was introduced by both Senator Voinovich and Congressman Upton in 2010.

draft legislation would place a hold on the development of a defense waste⁶ repository until a decision is made on the initial licensing of a Yucca Mountain repository. USNIC supports this aspect of the draft legislation, which would essentially suspend the 2015 decision by the previous administration to pursue separate repositories for commercial used fuel and defense waste. As documented in a recent Government Accountability Office report⁷, that decision was not adequately justified. Moreover, it was taken without formal consultation with stakeholders and, consequently, should not be allowed to stand. In addition, the discussion draft would task the EPA and the NRC with reviewing their generic repository regulations and determining if these regulations should be revised. In my opinion, the current generic regulations of both agencies are out of date and, in some cases, inconsistent with today's knowledge and international norms. The nation would be well served if both agencies were to revise their generic repository regulations in line with their more modern Yucca Mountain-specific regulations.

The discussion draft of the Nuclear Waste Policy Amendments Act of 2017 would make important and desirable changes to the country's framework for waste management. However, there is no need to wait for enactment of this legislation before taking any action. There are two things the government should do immediately that do not require authorizing legislation. First, the executive branch should re-establish OCRWM within DOE as the responsible entity for fulfilling its obligations under the NWPA. Successfully completing the licensing process will require a dedicated federal entity. Moreover, this action would send a strong signal that the current administration is committed to carrying out the law related to nuclear waste. Second,

⁶ This term actually goes beyond used fuel and HLW produced as a result of national defense activities. It encompasses all government-owned used fuel and HLW, including research reactor used fuel, foreign reactor fuel and associated HLW from its processing, etc.

⁷ GAO-17-174, "Benefits and Costs Should Be Better Understood Before DOE Commits to a Separate Repository for Defense Waste," Government Accountability Office, January 2017.

Congress should appropriate funding to the DOE and the NRC to restart the Yucca Mountain licensing process. Resolving more than 200 contentions will be a challenging endeavor after seven years of shutdown, but one that can be successfully accomplished with competent leadership and adequate funding. Accordingly, rebuilding the Yucca Mountain Project infrastructure to support licensing should begin without further delay.

In closing, I want to reiterate my thanks to your subcommittee for considering this important issue and, in particular, to Chairman Shimkus for his unswerving advocacy for an effective federal program to manage used fuel and HLW in a manner that is consistent with federal law. It has been said many times that HLW disposal is a political problem, not a technical one. Nevertheless, it is an issue that must be addressed and the nuclear industry, which has consistently fulfilled its obligations under the NWPA, stands ready to work with the government to do so.

I look forward to answering your questions. Thank you again for the opportunity to speak.



U.S. NUCLEAR INFRASTRUCTURE COUNCIL (USNIC)

USNIC Backend Working Group Issue Brief

Charting a Path Forward

March 2017

Issue

Today, the Nation's nuclear waste management program stands at an impasse, largely due to universally recognized political reasons. As a result, there is no available disposal pathway for the Nation's growing inventory of both commercial and defense used nuclear fuel and high-level waste. Currently, used fuel and high-level waste (HLW) from both commercial and defense activities remain in safe storage at 121 sites in 39 states. U.S. spent fuel inventories now exceed 75,000 metric tons at 99 operating reactors and 14 shutdown sites.

It has been more than 30 years since enactment of the Nuclear Waste Policy Act (NWPA); more than 18 years since the federal government failed to meet its statutory and contractual obligation to begin removing used fuel from nuclear energy reactor sites; more than eight years since the license application review process by the U.S. Nuclear Regulatory Commission (NRC) began; and more than six years since the Obama Administration defunded the repository program and vacated the Office of Civilian Radioactive Waste Management (OCRWM).

This impasse is costing U.S. taxpayers billions of dollars. The current estimate of federal liabilities is approximately \$25 billion and growing – an \$11 billion increase since the Obama Administration first moved to terminate the Yucca Mountain project. In addition to these mounting costs, failure to bring closure to the backend of the nuclear fuel cycle adversely impacts nuclear energy as a vital component for reliable, affordable and clean electricity – and energy independence, jobs, exports and competitiveness. Some members of Congress have balked at funding new nuclear technology development based on the lack of a disposal pathway. For two years, after the U.S. Court of Appeals struck down its Waste Confidence Rule, the NRC placed a moratorium on new nuclear plant licenses and license renewals. Ten states have a ban or restrictions on the construction of new nuclear energy facilities in large part due to the lack of a disposition pathway for used fuel. Globally, as noted by former President Obama's own Blue Ribbon Commission on America's Nuclear Future (BRC), the continued stalemate is damaging America's international standing on issues of nuclear safety, nonproliferation and security.

Urgent action by the Congress, the Trump Administration and the U.S. Department of Energy (DOE) under Energy Secretary Rick Perry is required to re-establish the basic foundational elements of a comprehensive program for used nuclear fuel and high-level waste storage and disposal.

USNIC Backend Working Group Recommendations

The U.S. Nuclear Infrastructure Council's Backend Working Group was established in 2012 to follow matters related to used fuel management and encourage actions to resolve the impasse over the Nation's nuclear waste management program.

It is crystal clear that decisive, swift and tangible action is needed to re-establish a comprehensive program to address the federal government's statutory and contractual obligations for disposition of growing inventories of spent nuclear fuel and high-level waste – as well as to provide a path forward for the backend of the fuel cycle for currently operating reactors and pave the way for new nuclear energy plants required for U.S. energy independence, jobs, exports, made-in-America clean energy leadership and national security.

The USNIC Backend Working Group believes that Congress and DOE should address needed program reforms through the adoption of an omnibus approach that advances the Yucca Mountain project, develops supportive consolidated interim storage capabilities as needed, assures the availability of associated transportation infrastructure, and aligns organizational focus and resources behind the effort while looking to recycling and advanced reactor technologies that can optimize the fuel cycle.

Specific features of this multi-faceted approach include:

- ***Yucca Mountain Repository Project.*** As a cornerstone to any comprehensive program, the NRC environmental and safety review of the DOE Yucca Mountain license application must be completed, culminating in a final agency decision to authorize (or not) construction of the repository. This action should include immediate action to re-establish the DOE waste management organization (OCRWM); re-engagement by the DOE in the NRC Yucca Mountain review; and enactment of legislative provisions for (i) securing the necessary land withdrawal and water rights and (ii) providing benefits to local and state governments in return for hosting a repository. The 2015 Presidential decision to develop a repository other than Yucca Mountain for waste resulting from defense activities should be reversed unless and until there is a formal opportunity for stakeholder input and the benefits of a separate repository are clearly shown to outweigh the costs.
- ***Consolidated interim storage.*** While completing Yucca Mountain licensing, consolidated interim storage solutions should be pursued, with an emphasis on existing private-sector initiatives. Consolidated storage is not a substitute for a permanent geologic repository but it does offer potential advantages as part of an integrated used fuel management system. First priority for consolidated storage spent fuel acceptance should be given to used fuel currently residing at sites with no operating reactor. Consistent with the NWPA, any tangible federal action related to consolidated storage should not pre-empt completion of licensing of the Yucca Mountain repository.
- ***Management and funding reform.*** Over the medium term, this action should include the establishment of a separate, politically independent but accountable federal corporation-type organization which is mission-based and structured to execute all necessary steps and activities to develop, license, construct, operate and decommission nuclear used fuel and high-level waste

storage facilities and permanent repositories. In addition, the Nuclear Waste Fund¹ must be restructured so that access to both the fund's assets and annual receipts are available for expenditure by the new entity, subject to appropriate congressional oversight.

- ***Transportation planning and execution.*** Near-term work should focus on assuring the availability of necessary infrastructure and capabilities (railcars, rail spurs/alternatives, etc.) to move used fuel and high-level waste. To the maximum extent practicable, the private sector should be utilized to implement these activities consistent with the current provisions of the NWPA.
- ***Research, development and demonstration.*** Continued work must enable advanced reactor and backend technologies that offer the promise of improved economics, enhanced safety, maximize utilization of energy resources and optimization of waste management and disposal.
- ***Assuring shared value for host communities.*** The development of facilities for management and disposal of used nuclear fuel and HLW represents a significant investment in nuclear infrastructure and provides a unique platform for economic development and future research development and demonstration. As a committed partner in assuring the successful siting and operation of these facilities, the federal government should provide the necessary resources for impact assistance along with tailored incentives that support the long-term mission of nuclear waste storage and disposal sites and their value to the host community.

Background and Discussion

Upon taking office the Obama Administration sought to terminate the Yucca Mountain Project for which the DOE had submitted a license application to the NRC in 2008. The Administration's actions contravened the will of the legislative branch of the federal government, as expressed first in 1987 when Congress designated Yucca Mountain, Nevada as the only candidate site for the characterization as the nation's permanent geologic repository for used fuel and HLW, and then again in 2002 when a large bipartisan majority in Congress overrode a State of Nevada veto of the site selection consistent with the NWPA, as amended.

In 2010, Secretary of Energy Steven Chu announced the establishment of the Blue Ribbon Commission on America's Nuclear Future. In March 2010, Secretary Chu stated that Yucca Mountain is not a "workable option" for a geologic repository, and subsequently the DOE made a motion in the NRC Yucca Mountain licensing proceedings that the Yucca Mountain license application be withdrawn with prejudice. Significantly, the DOE lawyers defending the DOE withdrawal motion conceded that the application was neither flawed nor the site unsafe. The NRC licensing board denied the motion – a decision that was subsequently upheld by a vote of the Nuclear Regulatory Commission.

After receiving recommendations from the BRC in 2012, a year later in January 2013, the DOE released a "Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste". The Administration's strategy recommended a consent-based approach to siting

¹ The Nuclear Waste Fund is the government's accounting of money paid by nuclear power plant operators for management and disposal of used fuel pursuant to the NWPA (i.e., nuclear waste fees), plus accumulated interest on the balance, minus expenditures.

² Utilities are currently storing used fuel safely and securely at reactor sites using a combination of underwater

and developing both pilot and larger-scale consolidated storage facilities² for used fuel to be available in 2021 and 2025, respectfully. The strategy also called for the siting and development of a geologic repository other than Yucca Mountain for the disposal of used fuel and HLW with an operational date beginning in 2048. However, following the release of the strategy in 2013, the Obama Administration made no concrete progress. In March 2015 former President Obama issued a memorandum to Secretary of Energy Moniz documenting the president's finding that "... the development of a repository for the disposal of high-level radioactive waste resulting from atomic energy defense activities only is required."³ In December 2015 DOE solicited public input on how to implement "... a consent-based siting process to establish an integrated waste management system to transport, store, and dispose of commercial spent nuclear fuel and high level defense radioactive waste." In December 2016, DOE released its proposed framework for consent-based siting, but no implementing actions have been undertaken.

During this time, the federal courts rebuked the Obama Administration's policy in three separate actions. In 2012, the U.S. Court of Appeals struck down the NRC's revision of the Waste Confidence Rule, which codified NRC's confidence, that nuclear spent fuel storage and disposal facilities would be available when needed. The Court remanded the rule back to the NRC, which responded by initiating a new rulemaking on Continued Storage supported by a new generic environmental impact statement. The NRC also placed a moratorium on the issuance of new reactor and independent spent fuel storage installation licenses and license renewals until the NRC completed action on the new rule. The NRC's licensing moratorium on new nuclear plant licenses lasted over two years until the NRC implemented the Continued Storage Rule which held that used fuel could be stored safely indefinitely on reactor sites or at one or more consolidated storage facilities. The new rule was challenged again in the U.S. Court of Appeals, but this time the court supported the NRC's new rule and associated environmental impact statement.

In addition to action on the Continued Storage Rule, the U.S. Court of Appeals issued in 2013 a writ of Mandamus compelling the NRC to continue the Yucca Mountain license application review as long as there is available congressionally-appropriated funding. Separately and also in 2013, the U.S. Circuit Court ordered the DOE to reduce the nuclear waste fee⁴ to zero, unless and until either the DOE implements the NWPA and therefore continues with the Yucca Mountain Project, or Congress passes an alternative nuclear waste management program.

As a result of the Court's writ of Mandamus, the NRC early in 2015 issued a Safety Evaluation Report (SER) that found a Yucca Mountain geologic repository as designed and presented in the DOE license application was safe and met the NRC's long-term performance standard for isolating the spent fuel and high-level waste from the biosphere. In 2016 the NRC issued a supplement to the Yucca Mountain Environmental Impact Statement addressing impacts on ground water which found,

² Utilities are currently storing used fuel safely and securely at reactor sites using a combination of underwater storage in purpose-built pools and dry storage in robust shielded containers. Consolidated storage refers to collecting used fuel and storing it at one or a few locations, rather than scattered around the country at dozens of reactor sites.

³ The Obama memorandum reversed a 1985 finding by DOE and President Reagan that there was no need to develop a separate defense repository. The 2015 decision was made with no formal solicitation of stakeholder input and no justification from a cost/benefit perspective.

⁴ The nuclear waste fee was established by the NWPA and consisted of an ongoing levy on nuclear power reactor operators to cover the government's costs associated with managing and disposing of used nuclear fuel. A fee of \$0.001 per net megawatt-electric of nuclear electricity was assessed until DOE reduced the fee to zero in 2014 in compliance with the court ruling.

similar to the SER, that any radiological doses from the ground water pathway would be small and well within regulatory limits.

Since DOE terminated its work on Yucca Mountain in 2010, the House of Representatives has repeatedly, by large bipartisan majorities, voted to provide funding to the NRC and DOE to complete the NRC Yucca Mountain licensing process. The Senate has not voted to fund the Yucca Mountain project⁵, but the Senate Appropriations Committee has supported provisions for consolidated storage, including consolidated storage at private-sector sites. Under the fiscal year 2017 stop-gap funding resolution, neither Yucca Mountain nor consolidated storage received funding.

With regard to authorization legislation, S.854, “The Nuclear Waste Administration Act of 2015” was introduced in the Senate and referred to the Senate Energy and Natural Resources Committee in the 114th Congress. Sponsored by the leadership of both the Senate Energy and Appropriations Committees, S.854 is generally modeled after the recommendations of the Blue Ribbon Commission and is essentially identical to S.1240 introduced in the 113th Congress. The bill would establish a new federal agency to implement the nation’s nuclear waste management program, institute funding reform providing that agency with increased access to money in the Nuclear Waste Fund, and authorize a consent-based siting process for both consolidated storage facilities and geologic repository sites.

In the House, there has been no comparable authorizing legislation introduced, though legislation remains under active development and is anticipated in 2017. Targeted proposals introduced in the 115th Congress include H.R. 433, a measure limiting development of a separate repository for defense waste, and H.R. 474, the reintroduction of “The Interim Consolidated Storage Act” authorizing a private consolidated storage initiative with priority given to used nuclear fuel located on sites without an operating nuclear reactor.

While the nuclear waste management program has been stymied for years in the executive and legislative branches of government, it cannot be allowed to remain so indefinitely. The Court decisions discussed herein highlighted the failures of the government to discharge its duties and responsibilities, and responsible congressional leaders are pushing for action in both appropriations and authorization bills that would get the country’s nuclear waste storage and disposal program moving again. It is time for the new Administration to join with Congress and re-establish the Nation’s leadership role in the safe, peaceful and responsible use of nuclear energy.

For further information contact Caleb Ward: caleb.ward@usnic.org | 202-332-8845

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The USNIC Backend Working Group is a project of the U.S. Nuclear Infrastructure Council (www.usnic.org), the leading business consortium for new nuclear energy and promotion of the U.S. supply chain globally. The views above represent a consensus of the USNIC’s Backend Working Group and the Council, but do not necessarily represent the specific views of individual member companies and organizations.

⁵ Democratic Senator Harry Reid of Nevada, an adamant opponent of the repository, used his influence as Majority Leader through 2012 and Minority Leader thereafter to prevent Senate votes on Yucca Mountain funding. Senator Reid retired from the Senate at the end of 2016.