

Statement of

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**NRDC Statement for Legislative Hearing on
“Cleaning Up Communities: Ensuring Safe Storage
And Disposal Of Spent Nuclear Fuel”**

Before the

**Congress of the United States
United States House of Representatives
Committee on Energy & Commerce
Subcommittee on Environment and Climate Change
Room 2322, Rayburn House Office Building**



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I. Introduction & Summary.

Mr. Chairman, Mr. Ranking Member and members of the Subcommittee, thank you for providing the Natural Resources Defense Council, Inc. (NRDC) this opportunity to present our views on H.R. 2699, “Nuclear Waste Policy Amendments Act of 2019”; H.R. 3136, “Storage and Transportation Of Residual and Excess Nuclear Fuel Act of 2019”; and H.R. 2995, “Spent Fuel Prioritization Act of 2019.” We appreciate that the Committee sees the need to commence work again on solving our national nuclear waste dilemma and we hope to work with all of you on a constructive process.

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 three million members, supporters and environmental activists with offices in New York; Washington, D.C.; Los Angeles; San Francisco; Chicago; Bozeman, Montana; and Beijing. We have worked on nuclear waste matters since our founding and continue to do so.

We are cognizant, as are all of you, of the veritable tsunami of legislative history detailing objections or support to similar pieces of legislation as those before us today. Indeed, we’ve contributed to that wealth of testimony and did so before this Committee only a few years ago.¹ With that in mind, we will use this valuable time to summarize our position on key issues in each draft and then turn to what we hope is the productive step of charting an alternative, pragmatic legislative path forward.

Each item under discussion today is premised on a good intention – finding a way forward on storing or disposing of commercial spent nuclear fuel. There are nods to garnering consent; there are efforts to create a sensible process for shipping nuclear waste when the day finally comes for transport away from reactors; and there are overdue acknowledgements that communities that have benefitted from nuclear power, but also bear the burden of hosting the waste, need support. But even with these constructive thoughts, if these drafts were enacted, they would set us back and could derail our efforts at scientifically defensible and publicly accepted solutions to the

¹ See, e.g., Hearing Before The Subcommittee On Environment Of The Committee On Energy And Commerce, House Of Representatives, 115th Congress, First Session April 26, 2017, Serial No. 115–26, online at <https://www.govinfo.gov/content/pkg/CHRG-115hrg25996/pdf/CHRG-115hrg25996.pdf>; see NRDC’s submission at 136 (pdf page 140 of 172); or NRDC’s 2015 Testimony Before the House Energy & Commerce Committee; see <https://www.nrdc.org/experts/matthew-mckinzie/nrdc-testifies-house-representatives-nuclear-waste>.

nuclear waste problem in the United States. Thus, we testify today in opposition to moving forward on these drafts and suggest another course.

Here's why. Enacting what is on offer today would immediately precipitate a welter of controversy and litigation from the potential recipient states, which will result in no progress toward a solution and years more rancor. Witness, as a keen example, the Private Fuel Storage interim nuclear waste storage site in Utah, which was licensed in 2006 but has not, nor will foreseeably receive waste due to the state's steadfast resistance. Enacting these drafts would also continue all the attendant frustrations that come with nuclear waste in pools or dry storage at Nuclear Regulatory Commission (NRC) licensed reactors around the country. Seven years ago, President Obama's Blue Ribbon Commission on America's Nuclear Future rightly found that consent-based siting, with meaningful partnerships and open communication among federal, state, local, and tribal leaders, is the most important step toward establishing geologic nuclear waste repositories.² These drafts bypass that wise observation, and try a slight variation of the same approach of forcing the waste on Nevada, New Mexico, and Texas (or elsewhere).

There is another way forward; one that defuses the rancor before it begins. A legislative change that would provide potential host states the right to say "No," but also "Yes, and on these strict, protective terms, and with these distinct limits." A legislative change that might not address all the waste at once, but it can get us started and likely in a much faster time frame than attempting to fight Nevada once again. This path forward can happen if Congress fixes the fundamental flaw in the Nuclear Waste Policy Act, 42 U.S.C. §10101 *et seq.* (NWPA) – the exemption of radioactivity from environmental laws that has been part and parcel of the Atomic Energy Act for decades. Ending this exemption through legislative change will then allow for meaningful, full regulatory authority from the EPA and the potential host states. These bills won't get us to moving waste off reactor sites, but this change in law can.

II. NRDC's Analysis of the Draft Legislation Presented.

While all three draft bills begin with good intentions and have elements of constructive policy, they don't collectively, or on their own, chart a way forward. We briefly discuss some key points from each in turn.

² President Obama's "Blue Ribbon Commission on America's Nuclear Future - Report to the Secretary of Energy, January 31, 2012" (hereafter "BRC"); see online at https://www.energy.gov/sites/prod/files/2013/04/f0/brc_finalreport_jan2012.pdf.

A. H.R. 2699, “Nuclear Waste Policy Amendments Act of 2019”

H.R. 2699 is the reprise of an effort we’ve seen over the last several years, with a few changes. Our reactions in 2015 and 2017 (see citations, n. 1), remain the same. The provisions we briefly address follow in italics, with our observations in regular text.

Title 1, Sec. 101 (a)(4) The Secretary shall, not later than 90 days after the date of enactment of the Nuclear Waste Policy Amendments Act of 2019, publish a request for information to help the Secretary evaluate options for the Secretary to enter into cooperative agreements with respect to one or more monitored retrievable storage facilities.

Respectfully, this provision, and the other provisions in Title 1, and Title III (where DOE can take title to all the nuclear waste) are premature. First, immediately going forward with a consolidated storage proposal (which is equivalent to a “monitored retrievable storage facility”) before working out the details of a comprehensive legislative path to solve the nuclear waste problem (firmly and irrevocably connecting the licensing of storage to the licensing of a permanent repository) severs the link between storage and disposal and creates an overwhelming risk that an interim storage site will become a 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 irrespective of regulatory process, or open up New Mexico’s Waste Isolation Pilot Plant (WIPP) facility for spent nuclear fuel disposal – the latter site designed and intended for defense-generated nuclear waste with trace levels of plutonium, not spent fuel (and NRDC notes, a site that has already seen an accident dispersing plutonium throughout the underground and into the environment, contaminating 22 workers and making the site functionally inoperable for years). All of this runs precisely counter to the core admonition of President Obama’s Blue Ribbon Commission (BRC) that “consent” come first.

We appreciate the intent of Title I, section 103’s expansion of NWPA section 143(b) from previous iterations of the bill, as it makes a nod toward keeping some fig leaf of a link between storage and disposal. But once a site has been forced to start accepting waste, any future Congress can (and we have strong historical evidence they likely will) simply override any single state’s objection to altering the terms of how much waste or on what timeline waste will be sent once that site has become a de facto repository.

Sec. 102(b) AUTHORIZATION ... the Secretary is authorized to—(1) site, construct, and operate one or more monitored retrievable storage facilities; and (2) store, pursuant to a cooperative agreement, Department-owned civilian waste at a monitored retrievable storage facility for which a non-Federal entity holds a license described in section 143(1).

(c) PRIORITY.—(1) IN GENERAL.—Except as provided in paragraph (2), the Secretary shall prioritize storage of Department-owned civilian waste at a monitored retrievable storage facility authorized under subsection (b)(2). (2) EXCEPTION.—(A)

DETERMINATION.—Paragraph (1) shall not apply if the Secretary determines that it will be faster and less expensive to site, construct, and operate a facility authorized under subsection (b)(1), in comparison to a facility authorized under subsection (b)(2).

In this provision, regrettably there are no safety, environmental or public acceptance criteria cited, only the expediencies of speed and reduction of expense. This is precisely the formula that produced the failure of the Yucca Mountain process and made it, as the previous administration noted, “unworkable.” Congress should turn away from this path and, rather, pursue a phased, adaptive, consent-based and science-based siting process as the best approach to gain the public trust and confidence needed to site nuclear waste facilities. Trust most of all is what is missing from the nuclear waste predicament – trust that what is promised in the present will be not altered for others’ convenience in the future. As we describe later in detail, the solution to regaining trust is that Congress must finally end the Atomic Energy Act (AEA) exemptions from environmental laws. By providing our hazardous waste and clean water laws full authority over radioactivity and nuclear waste facilities so that EPA and – most importantly – the states can assert direct regulatory authority, Congress can provide EPA and the states with familiar authority in which they can place ongoing trust.

Title II, Sec. 201 LAND WITHDRAWAL, JURISDICTION, AND RESERVATION

These provisions, of which we only note the title, run counter to state authority and likely lead to the same kind of stalemate that currently exists this day. NRDC expects that Nevada can and will ferociously object to this usurpation of its rights. Indeed, this kind of legislative alteration of rights sets the stage for other states to beware if and when nuclear waste projects commence in their states (see, *e.g.*, New Mexico, and the changes necessary if Congress were to decide WIPP might provide a final disposal option).

Sec. 202 (b)(3) At any time before or after the Commission issues a final decision approving or disapproving the issuance of a construction authorization for a repository pursuant to paragraph (1), the Secretary may undertake infrastructure activities that the Secretary considers necessary or appropriate to support construction or operation of a repository at the Yucca Mountain site or transportation to such site of spent nuclear fuel and high-level radioactive waste. Infrastructure activities include safety upgrades, site preparation, the construction of a rail line to connect the Yucca Mountain site with the national rail network (including any facilities to facilitate rail operations), and construction, upgrade, acquisition, or operation of electrical grids or facilities, other utilities, communication facilities, access roads, and nonnuclear support facilities.

This is premature and wasteful spending of taxpayer dollars on Yucca Mountain infrastructure prior to meaningfully restarting the licensing process, which we think would be fruitless. Only a few years ago, the NRC put the cost of completing the Yucca Mountain license application at more than \$330 million. Efforts to revive this process would be at best problematic and likely waylay the process of developing a repository for a significant period of time. Briefly, there are hundreds of license contentions to be litigated at significant length and cost. One contention in particular contests the viability of the Department of Energy's (DOE's) design for titanium drip shields that are intended to be placed on top of each of the thousands of waste canisters in Yucca Mountain's underground tunnels to deflect 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 engineer, license, pay for, and much less install the shields until at least 100 years after the waste goes in. Quite simply, it seems fair to suggest Yucca's likely repository configuration will not meet NRC requirements.

This and other issues will be vigorously litigated by Nevada, which has filed more than 200 contentions challenging DOE's license application for Yucca Mountain. To put such a hearing process in perspective, NRDC concluded nearly six years of a NRC licensing proceeding where not one party – not industry seeking the license, not NRC Staff, nor the environmental intervenors – had any interest or took any steps to functionally prolong or delay the proceeding. And in the more than five years of this proceeding, only three contentions were fully litigated on their merits, not the more than 200 teed up for the Yucca hearing if it were to ever be resumed. Any suggestion that the Yucca licensing proceeding could easily restart and quickly move to a successful conclusion for permanent disposal is a fallacy. And when that inevitable litigation rightly waylays yet another effort at a long-ago vetoed nuclear waste disposal proposal, the

damage to the nation's prospects to ever developing a repository may be long-lasting. Rather than go forward with construction as this provision allows, we urge Congress to take the careful course of building a publicly accepted, consent-based repository program.

Sec. 202 (b)(3)(B) & (C) If the Secretary determines that an environmental impact statement is required under the National Environmental Policy Act of 1969 with respect to an infrastructure activity undertaken under this paragraph, the Secretary need not consider the need for the action, alternative actions, or a no-action alternative ... (C) NO GROUNDS FOR DISAPPROVAL.— The Commission may not disapprove, on the grounds that the Secretary undertook an infrastructure activity under this paragraph—(i) the issuance of a construction authorization for a repository pursuant to paragraph (1); (ii) a license to receive and possess spent nuclear fuel and high-level radioactive waste; or (iii) any other action concerning the repository.

These provisions conflict with well-established and necessary requirements of the National Environmental Policy Act, 42 U.S.C. §4321, *et seq.* (NEPA) and make it clear that compliance with longstanding environmental laws will be an afterthought. Doing so exacerbates the public interest community's (and that of Nevada) objection of the last three decades that the process of developing, licensing, and setting environmental and oversight standards for the proposed repository has been, and continues to be, rigged or 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.

Sec. 205 It is the Sense of Congress that the Secretary of Energy should consider routes for the transportation of spent nuclear fuel or high-level radioactive waste transported by or for the Secretary under subtitle A of title I of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10131 et seq.) to the Yucca Mountain site that, to the extent practicable, avoid Las Vegas, Nevada.

This provision illustrates the difficulties faced in trying to force a project on an unwilling and non-consenting host state. Are other cities along the routes in other states that will be affected by the avoidance of Las Vegas allowed to have a say in the matter? And if the NEPA process is truncated, is there any meaningful opportunity to have that say? Lack of consent from an unwilling host state is a recipe for disaster, whether the issue is nuclear waste or any other great public concern. We include a map (NRDC Att. 1) that highlights the vast number of routes through many states that will be taken by nuclear waste on its way to Yucca Mountain. One can visualize the extraordinary number of regions and people that will be affected by this enterprise,

and without a very different process to arrive at public acceptance of the process of developing those routes and the associated burdens, we see a continuation of the stalemate.

Sec. 601(a)(1)(A) Not later than 2 years after the Nuclear Regulatory Commission has issued a final decision approving or disapproving the issuance of a construction authorization for a repository under section 114(d)(1) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10134(d)) (as so designated by this Act), the Administrator of the Environmental Protection Agency shall (A) determine if the standards promulgated under section 121(a) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10141(a)) should be updated; and (B) submit to Congress a report on such determination.

This provision has the matter precisely backwards. 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. We expand upon this later (*infra*, 13, 14).

B. H.R. 3136, “Storage and Transportation Of Residual and Excess Nuclear Fuel Act of 2019”

We noted at the outset that H.R. 3136 is premised on the good intention to get the process moving, but if enacted, this would surely precipitate a welter of litigation. And if any nuclear waste storage facility were successfully constructed under the authority this law would provide, there are no limits in place (including neither quantity of waste or timing of licensing) preventing such a facility from becoming a de facto permanent site, as the law completely severs the link between storage and repository.

Further, while we appreciate the nod to consent in Sec. 191(f)(4), as New Mexico’s recent objection letter from Governor Lujan Grisham (NRDC Att. 2) makes plain, there is no simple path forward. Requiring consent to site a facility does not provide a state, unit of local government, or tribe any recourse against future bad acts once the facility is approved. And removing the ability of the United States to unilaterally break the terms of the contract (under the “Binding Effect” provision in subsection B of the Section), could potentially give a state an artificial measure of political 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. Bluntly, efforts to force the interim storage process forward prior to putting together a scientifically defensible and publicly accepted program that provides states with durable authority is unwise and likely to derail progress yet again.

Rather than prematurely bypassing a careful, consent-based process, NRDC urges Congress to require the NRC and industry to focus spent fuel storage efforts on ensuring 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.

C. H.R. 2995, “Spent Fuel Prioritization Act of 2019”

We have no quarrel with the idea of a health and safety prioritization process for the queue of spent nuclear fuel that will, someday, go deep underground in a geologic repository. It's a constructive, thoughtful part of the discussion that needs a thorough airing to make wise policy. But not right now, for two key reasons.

First, reordering the queue of waste for a repository program that has been all but defunct for years puts the cart before the horse. We don't even have a path forward at present. Neither Yucca Mountain nor the current interim storage ideas are likely to have success, and suggesting a reordering of the waste that may not move for decades if the impasse continues is misplaced. Rather, Congress directing NRC to require improved storage at the reactor site – such as legislatively directing the NRC to require much quicker movement to hardened onsite storage and not allowing for long term storage at inappropriate locations, like a beach in California, when other, better options at the utility/reactor controlled land exist – is a much more sensible approach for the near term while Congress works out a better legislative pathway for durable solutions.

Second, any reordering of the nuclear waste queue has the potential for a change in the ongoing burden on a huge number of host communities and regions. While all of these communities benefited from the power generation, they now bear the burden of hosting the dangerous nuclear waste, and all that is entailed with that, for decades to come. This is something that needs to be done carefully, and the consent/regulatory authority we will describe in the coming pages can provide a suitable pathway for this dialogue to happen.

III. Understanding the History & Need for a Fundamental Change in Law

As detailed above, H.R. 2699 and H.R. 3136 attempt to clear the legal obstacles to allow New Mexico or Texas to receive sizable portions of the nation's nuclear waste at a consolidated interim storage site that has significant legal and technical challenges and is opposed by the entire New Mexican Congressional delegation and Governor.³ Title II of H.R. 2699 sets the abandoned, defunct Yucca Mountain licensing process back in motion, but with an even more truncated environmental review, and with a set of new potential sources of state funding. Nevada issued its notice of disapproval of Yucca Mountain on April 8, 2002 and has repeatedly stated its opposition, seemingly to no avail. Respectfully, none of this will work. There is a better way.

A. How We Arrived At This Impasse

After more than 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 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, this defeat has many causes. Several agencies (including the EPA, the DOE, the NRC, and the U.S. Department of Justice (DOJ)) and Congress repeatedly distorted the process established in the NWPA, including for developing licensing criteria for a proposed repository. In each instance, such action weakened environmental standards rather than strengthening them, and always to ensure the site would be licensed, no matter the end result. These actions both precipitated and gave traction to ferocious resistance from Nevada, Tennessee, New Mexico, Washington, Texas, Louisiana, Mississippi, Utah, Georgia, Maine, Minnesota, New Hampshire, North Carolina, Virginia, Wisconsin, and Indian tribes. But even those actions are not the reason we remain locked in a virtual *cul de sac*, witness to repeated attempts to try and force the same result by the same fashion – *i.e.*, transferring the entirety of the nation's nuclear waste to an above ground

³ See NRDC Att. 2. Also, we note that while there is a nod toward “consent” in the text of the legislation, *see* Section 143(a)(2), Conditions for MRS Agreements, it would therefore seem that the New Mexico consolidated interim storage site could be dispensed with now and any plans abandoned. There is no such similar provision for the repository process in Title II.

parking lot in a resistant New Mexico, or to the technically inadequate attempt at a repository in Nevada.

B. Science & Politics Are Both Necessary

Nuclear waste remains a third rail of American politics for a singular reason – **a deep misunderstanding of federalism and the necessary role of states in the process of solving this challenge**. If you take one message from our appearance before you today, it is that there is another way to try and cut this Gordian Knot, but it must be done in a fashion that respects the extraordinary history of cooperative federalism in environmental laws.

We urge the Committee to appreciate the metamorphosis of Congressman Mo Udall’s (D-AZ) NWPA, the organic subject of today’s hearing. Indeed, NRDC views the original incarnation of the NWPA as a remarkable, nearly visionary piece of legislation that contained one tragic, fatal flaw: a deep misunderstanding of federalism and the necessary role of states. And that flaw is the single clear conclusion that we have drawn from the history of failures associated with nuclear waste.

As the Committee is aware, the enacted 1982 NWPA set forth obligations and duties for EPA, DOE and NRC, with Congressional oversight and checkpoints along the way. The law attempted to place science in the forefront and balance political power in a way that might allow for this fraught, difficult process of finding and developing disposal sites for nuclear waste. But, importantly, the NWPA never challenged or altered in any way the AEA’s provision for exclusive federal jurisdiction over radioactive waste. Despite this baked-in oversight, the NWPA’s attempt at the legal balancing act was unprecedented at the time and that observation remains true today. And as we all know, the balancing act was upset as the NWPA was repeatedly altered and the process was finally abandoned by the previous administration in 2009.

But why the repeated derailments? Some of my fellow witnesses here today suggest that “not in my backyard” (NIMBY) sensibilities and associated politics are responsible for the failure to license and open Yucca Mountain. But as noted at the outset – this is wrong. The deep misunderstanding of federalism and the necessary role of states at the heart of the NWPA just kept getting lost over the years. The federal exclusivity over nuclear waste regulation was simply presumed *a priori*, without consideration as to whether that might be at the root of the problem.

So how is the misunderstanding of federalism at the root of the problem? The relationship of the federal government to the governments of the 50 states that comprise our republic is the fundamental fact of American politics. Our political system has never easily digested or durably solved profound national problems like voting rights, health care, gun control, carbon restrictions, or the disposal of nuclear waste by either federal fiat or, conversely, by turning matters over to the states entirely.⁴ And in every instance of national decision making on these and other complex issues, heavily compromised laws or regulations have taken into account the needs and perspectives of states.

Bedrock environmental laws reflect this fact. With the notable exceptions of the AEA (the organic act for nuclear power) and its progeny, the NWPA, there is federalist intention at the heart of environmental statutes and a role expressly reserved for the states. As examples, the Clean Water Act, Clean Air Act, and Resource Conservation & Recovery Act (RCRA) allow states authority to implement those air, water, and waste programs, respectively, in lieu of a federal program. States that obtain “delegated” authority from the federal government must meet minimum federal standards (and the federal government retains independent oversight and enforcement authority). And generally, depending on state law, those delegated states can impose stricter requirements or different, but no less protective, regulatory mandates that meet the needs of the state in question. Nuclear waste should be no different, but under the AEA and the NWPA, it is different.

So, where do these observations leave us? It is NRDC’s firm conclusion that Congress is right to take up these matters, that new nuclear waste legislation must be written, and that a new process must be created. Consistent with the expressed statements of so many in the Congress today, whatever results must be “consent based,” concordant with President Obama’s bipartisan BRC, and take into account the needs of the industry and their federal champions. But this time, any new legislation must also take into account the fundamental need for public and state acceptance and there is only one way to do that, as we explain next.

⁴ For perspective on the ever-present interplay of the constitutional principles of federalism and equal sovereignty of the states and the extraordinary controversies that still attend such matters, *see* the 2013 landmark (5 votes to 4 votes) Voting Rights decision and its vigorous dissent, *Shelby County, Ala. v. Holder*, 133 S. Ct. 2612 (2013).

C. It Is Past Time to Normalize the Treatment of Nuclear Waste Under Environmental Law

State consent and public acceptance of a nuclear waste solution will never be willingly granted unless and until power to make such a decision as to how, when and where such waste is disposed of is shared rather than decided by federal fiat. There is only one way that can happen consistent with the protective, cooperative federalism at the heart of environmental law. Specifically, Congress must finally end the AEA's exemptions from environmental law. Our hazardous waste and clean water laws must have full authority over radioactivity and nuclear waste facilities so that EPA and – most importantly – the states can assert direct regulatory authority. This will necessarily alter the federalism oversight that has been central to the failure of the NWPA.

The NWPA's (and AEA's) misunderstanding of the importance of federalism is at the heart of the repository program's failure. If we don't find a way to give EPA and the states regulatory power over nuclear waste – and that is accomplished only by doing away with the environmental exemptions in the AEA – we will not solve this dilemma. Lack of consent from an unwilling host state selected in an expedient demonstration of legislative and administrative power over the (statutorily defined) powerless is a recipe for inaction and, ultimately, disaster in this country, whether the issue is nuclear waste or any other great public concern.

IV. NRDC's Specific Prescription & How To Get This Right

A. Five Recommendations to Get the Nuclear Waste Program Back on Track

We can dispose of nuclear waste and do so in a fashion that is both scientifically defensible and publicly accepted, but we cannot do so if we keep using the approach that has failed for over 50 years. To that end, NRDC urges Congress to – (1) recognize that geologic 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 the fundamental change in law we described above; (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.

Rather than repeat mistakes of the last four decades, Congress must create a transparent, equitable process incorporating strong public health standards that are insulated from weakening those same standards when expedient to license a facility. Such a process can conclude with the licensing and operation of a suitable repository site (or sites) that can be effectively regulated under long effective environmental laws. We will briefly describe the criteria necessary for this path.

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

NRDC concurs with the long held, consensus recognition that our generation has an ethical obligation to future generations regarding nuclear waste disposal. Adherence to the principle of deep geologic disposal as the solution to this obligation is consistent with more than 60 years of scientific consensus. The decision to isolate nuclear waste from the biosphere implicates critical issues, including: financial security, environmental protection, and public health, and no other solutions are technically, economically, or morally viable over the long term. This is why NRDC strongly supports development of a science-based repository program that acknowledges the significant institutional challenges facing nuclear waste storage and disposal. Thus, in whatever legislation moves forward, we urge explicit adherence to the first purpose of the NWPA, 42 U.S.C. § 10131(b)(1), “to establish a schedule for the siting, construction, and operation of repositories that will provide a reasonable assurance that the public and the environment will be adequately protected from the hazards posed by high-level radioactive waste and such spent nuclear fuel as may be disposed of in a repository.”

2. 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 the bipartisan 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. To give this recommendation explicit and simple context, as well as a precise set of language to follow, former Senator Bingaman’s 2012 legislative effort (S.3469, specifically in Sections 304, 305 and 306) set in place some of the

necessary structures that could avoid repeating the failure of the Yucca Mountain process. Specifically, the bill would have directed EPA to adopt, by rule, broadly applicable standards for the protection of the general environment from offsite releases of radioactive material from geologic repositories. The bill also directed NRC to then amend its regulations governing the licensing of geological repositories to be consistent with any relevant standard adopted by EPA. Further, embedded in Senator Bingaman's bill was 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.

These requirements and this phasing of agency actions in Senator Bingaman's bill were appropriate (*i.e.*, first EPA sets the standards and then NRC ensures its licensing process meets those standards) – and in the next recommendation we'll expand on how this coherent legal framework must be improved. But it is key that a coherent legal framework be in place before siting decisions get made. Unfortunately, recent iterations of nuclear waste legislation, including the items on offer today, ignore this wise sequencing, thus ignoring BRC's recommendation that new, applicable rules be in *final* form before site selection.

Congress should also direct that standards for site screening and development criteria be based on careful characterization of the radiation sources and resulting doses. The chief sources of radiation in high-level nuclear waste are the beta-decay of fission products like Cs-137 and Sr-90 and the alpha-decay of actinide elements like Uranium, Neptunium and Americium. Beta-decay is the primary source of radiation during the first 500 years of storage, as it originates from the shorter-lived fission products. Then alpha-decay becomes the dominant source after approximately 1,000 years. These radiation sources and doses must be considered to ensure a scientifically defensible legal framework for site selection.

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

a. The BRC Failed To Define Consent & Thereby Did Not Point The Way Forward.

For all its laudable qualities, the 2012 BRC report did not accurately portray the fundamental problem facing how to finally solve our nuclear waste disposal challenges. The BRC should have explicitly stated – and we do so here today – that Congress, with its firm understanding of

federalism, should legislate a role for EPA and the states in nuclear waste disposal by amending the AEA to remove its express exemptions of radioactive material from environmental laws.

State, local and tribal governments *must* be central in any prescription for a successful repository and waste storage program. Regrettably, current law has treated these relationships as dispensable afterthoughts, preempted from any meaningful power and authority over radioactive waste disposal sites. And H.R. 2699 and 3136 suffer the same malady.

Rather than address this problem head on, seven years ago the BRC chose to carefully skirt the matter in its report, while still noting that federal and state tensions are often central in nuclear waste disputes. We think this failure to squarely address the matter provides the continued impetus to ignore this elephant in the room. The BRC's Final Report states in pertinent part:

We recognize that defining a meaningful and appropriate role for states, tribes, and local governments under current law is far from straightforward, given that the Atomic Energy Act of 1954 provides for exclusive federal jurisdiction over many radioactive waste management issues. Nevertheless, we believe it will be essential to affirm a role for states, tribes, and local governments that is at once positive, proactive, and substantively meaningful and thereby reduces rather than increases the potential for conflict, confusion, and delay.

BRC Final Report at 56 (citation omitted).

The first sentence above both makes an observation and states a fact. The observation is that defining a meaningful and appropriate role for states, tribes, and local governments under current law is far from straightforward. The fact is that the AEA provides for exclusive federal jurisdiction over many radioactive waste management issues. According to the BRC, the difficulty of defining a meaningful and appropriate role for states is a "given" because of the fact of exclusive federal jurisdiction.

So what did the BRC suggest Congress do about this? Do away with the explicit federal jurisdiction? Increase the exclusivity of the federal jurisdiction? Somehow argue that the problems can be addressed without altering the exclusive federal jurisdiction in some fashion? There is nothing so clear or direct in the text. Rather, the BRC's very next sentence is simply an aspiration, without any explicit recommendation addressing the "given" (*i.e.*, exclusive federal jurisdiction) that makes the process so difficult. The BRC simply noted that it is "essential to affirm a role for states, tribes, and local governments that is at once positive, proactive, and

substantively meaningful.” NRDC agrees with the aspiration, but plainly the BRC missed an important opportunity to address the fundamental roadblock to solving our nuclear waste problem.

Without fundamental changes in our current, non-consent based law that explicitly address what the BRC termed, “federal, state and tribal tensions,” we will never approach closure and consent on transparent, phased, and adaptive decisions for nuclear waste siting. We now explore in more detail this decades-overdue change in the law.

b. NRDC’s Prescription For Ensuring States’ Authority – Remove The AEA’s Exemptions From Environmental Law.

As we stated at the outset (*supra* at 2), a meaningful and appropriate role for states in nuclear waste storage and disposal siting can be accomplished in a straightforward manner by amending the AEA to remove its express exemptions of radioactive material from environmental laws. The exemptions of radioactivity make it, in effect, a *privileged pollutant*. Exemptions from the Clean Water Act and RCRA are at the foundation of state and, we submit, even fellow federal agency distrust of both commercial and government-run nuclear complexes. Removing the exemptions would make the treatment of radioactive waste consistent with every other bedrock environmental law.

As the Subcommittee 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 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. 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 NRC and DOE, but the federal agencies can, and do, 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 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 the Nation could be much farther along in remediating the toxic legacy of the Cold War nuclear weapons production complex. Further, we could likely avoid some of the ongoing legal and regulatory disputes over operations at commercial nuclear facilities. Indeed, the BRC Report discusses 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 currently active site (BRC Final Report at 21). 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 as delegated programs under the Clean Water Act or RCRA, and others might not. In any event, substantially improved clarity in the regulatory 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 nuclear waste storage sites and geologic repositories.

Ending the anachronistic AEA exemptions does not guarantee a repository will be sited in the next few years. Indeed, expecting immediate progress on nuclear waste seems a fool's errand in light of the history. But ending these exemptions and providing RCRA authority for nuclear waste solves the most crucial matter for consent – the opportunity for meaningful, ongoing state oversight over nuclear waste. Any such statutory change bars the substantial likelihood of Congressional terms and modifications exacted from states (that might be willing to host a repository) years into a good faith negotiation on a site. Indeed, while it would be theoretically 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 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. It is past time to normalize nuclear waste with

the rest of environmental law and NRDC sees this as the key to developing a durable consent-based approach.

4. Recommendation 4 – Address Storage In A Phased Approach Consistent With The Careful Architecture Of 2012’s S. 3469.

Efforts to initiate a temporary away-from-reactor storage facility – that are now, unfortunately, in process in H.R. 2699 and 3136 – 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, or essentially dictating the choice of a nearby site, 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.

Specifically, the only way in which NRDC could see merit in a pilot project is in a hardened building,⁵ located at one of the currently operating commercial reactor sites. These potential volunteer sites – operating commercial reactors – already have demonstrated “consent” by hosting spent nuclear fuel for years or decades. 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 the consent necessary for hosting nuclear facilities in the first instance. Further, Congress would avoid entirely the ferocious fight that is sure to ensue with New Mexico and Texas citizens (and as happened with Utah and Tennessee) if they continue down the road with the DOE and the existing license applications in those states.

Rather than prematurely bypassing a careful, consent-based process that can arrive at protective, publicly accepted and scientifically defensible solutions, we have urged NRC and industry to focus spent fuel storage efforts on ensuring 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. Congress could legislatively direct such efforts and would be wise to do so.

⁵ An example of such a hardened building is the Ahaus facility in Germany.

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

Both the BRC Recommendations and all the subsequent legislative iterations (including those under discussion today) have, for the most part, wisely resisted inclusion of support for reprocessing, fast reactors, or other closed fuel cycle options as a corollary to new nuclear waste policy. We agree with relevant BRC findings, that there are “no currently available or reasonably foreseeable” alternatives to deep geologic disposal.⁶ As Senator Bingaman noted in 2012 at the outset of legislative efforts subsequent to the BRC process, “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.”⁷ At no point should this evolving nuclear waste process include support for closed fuel cycle options.

V. Conclusion

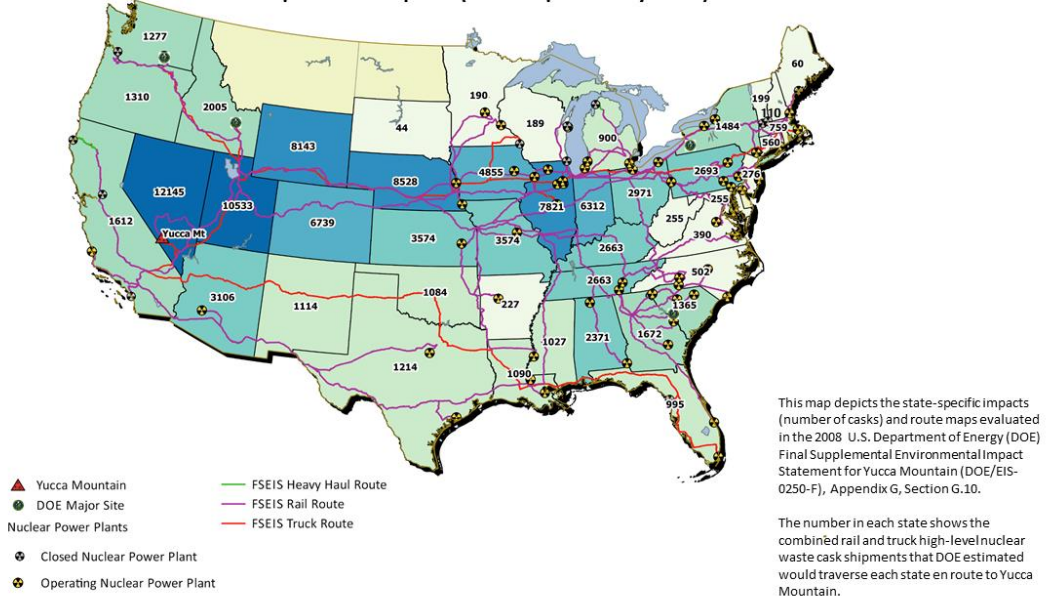
On one thing I hope we can all agree; the history of the federal nuclear waste program has been dismal. But decades from now others will face the precise predicament we find ourselves in today if Congress again tries to push through unworkable solutions contentiously opposed by states, lacking a sound legal and scientific foundation, and devoid of wide public acceptance and consent. Efforts to quickly restart the abandoned Yucca Mountain licensing process or fast track an interim storage facility will not work, lead to years of litigation, and thereby derail needed efforts to find scientifically defensible disposal sites. Unless and until 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.

We deeply appreciate the opportunity to testify today and I am happy to answer any questions.

⁶ BRC Final Report at 100.

⁷ See, *Previewing the Nuclear Waste Bill*, Remarks by Chairman Bingaman to the Bipartisan Policy Center, June 6, 2012, online at <https://www.energy.senate.gov/public/index.cfm/democratic-news?ID=490349a4-4b5e-4ac2-83e7-6e9a54c7aaf0>.

DOE 2008 Representative Transportation Routes to Yucca Mountain and Transportation Impacts (Cask Shipments by State)





State of New Mexico

Michelle Lujan Grisham
Governor

June 7, 2019

The Honorable Rick Perry
Secretary
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

The Honorable Kristine Svinicki
Chairman
U.S. Nuclear Regulatory Commission
Mail Stop O-16B33
Washington, DC 20555-0001

Dear Secretary Perry and Chairman Svinicki:

I write to express my opposition to the proposed interim storage of high-level radioactive waste in the state of New Mexico. The interim storage of high-level radioactive waste poses significant and unacceptable risks to New Mexicans, our environment and our economy. Furthermore, the absence of a permanent high-level radioactive waste repository creates even higher levels of risk and uncertainty around any proposed interim storage site.

As you know, the Nuclear Regulatory Commission (NRC) is evaluating the issuance of a 40-year license to Holtec International for a consolidated interim storage facility in southeastern New Mexico. As proposed, this facility would store spent nuclear fuel (SNF) and reactor-related materials greater than low-level radioactive waste.

A facility of this nature poses an unacceptable risk to New Mexicans, who look to southeastern New Mexico as a driver of economic growth in our state. New Mexico's agricultural industry contributes approximately \$3 billion per year to the state's economy, \$300 million of which is generated in Lea and Eddy Counties, where the proposed facility is to be sited.

Further, the Permian Basin, situated in west Texas and southeastern New Mexico, is the largest inland oil and gas reservoir and the most prolific oil and gas producing region in the world. New Mexico's oil and natural gas industry contributed approximately \$2 billion to the state last year. According to the U.S. Energy Information Administration (EIA), Lea County and Eddy County were ranked the second and sixth oil-producing counties in the country, respectively, earlier this year, with production continuing to increase.

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The Honorable Rick Perry
The Honorable Kristine Svinicki

Establishing an interim storage facility in this region would be economic malpractice. Any disruption of agricultural or oil and gas activities as a result of a perceived or actual incident would be catastrophic to New Mexico, and any steps toward siting such a project could cause a decrease in investment in two of our state's biggest industries. For those reasons, the New Mexico Cattle Growers' Association, the New Mexico Farm and Livestock Bureau and the Permian Basin Petroleum Association have all sent me letters opposing high-level waste storage in southeastern New Mexico. I have attached their letters for your review.

In addition to significant economic concerns about this project's potential impact on agriculture and the oil and gas industry, I am concerned about the financial burden it could place on the state and local communities. Transporting material of this nature safely requires both well-maintained infrastructure and highly specialized emergency response equipment and personnel that can respond to an incident at the facility or on transit routes. The state of New Mexico cannot be expected to support these activities.

Finally, given that there is currently no permanent repository for high-level waste in the United States, any interim storage facility will be an indefinite storage facility. Over this time, it is likely that the casks storing SNF and high-level wastes will lose integrity and will require repackaging. Any repackaging of SNF and high-level wastes increases the risk of accidents and radiological health risks. Again, New Mexicans should not have to tolerate this risk.

Given the potential for adverse impacts to public health, the environment and our economy, I cannot support the interim storage of SNF or high-level waste in New Mexico.

I thank you for your consideration of these concerns and look forward to your reply.

Sincerely,



Michelle Lujan Grisham
Governor