

Statement of

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on

S. 1240, Nuclear Waste Administration Act of 2013

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I. Introduction

Chairman Wyden and Ranking Member Murkowski, and members of the Committee, thank you for providing the Natural Resources Defense Council, Inc. (NRDC) this opportunity to present our views on S. 1240, a bill *[T]o establish a new organization to manage nuclear waste, provide a consensual process for siting nuclear waste facilities, ensure adequate funding for managing nuclear waste, and for other purposes.*

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 and Beijing. NRDC has worked on nuclear waste issues for over four decades, and continues to be engaged in shaping U.S. law and policy on the nuclear fuel cycle.

On September 12, 2012, NRDC testified before this committee on S. 3469, the template for S. 1240. We commended the preceding bill'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, the waste permanently isolated from the human 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.

NRDC cannot support S. 1240 in its present form, as described in this testimony and consistent with our 2012 testimony and May 2013 comments filed on the Discussion Draft. NRDC cannot support S. 1240 in its present form 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 repository 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) from using funds at his disposal to engage in, or support spent fuel reprocessing (chemical or metallurgical), ostensibly to improve the waste form for permanent disposal of spent fuel.

Regrettably, it appears that the authors of S. 1240 have rejected several key recommendations of the President's Blue Ribbon Commission for America's Nuclear Future (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, we believe S.1240 is salvageable and we look forward to engaging in constructive efforts to address the shortcomings we present in this testimony.

Of the five objections enumerated above, the first one – severing the link between interim and final nuclear waste storage – is possibly of greatest concern because it means the bill could result in the creation of *de facto* long-term above-ground repositories. As we've stressed since the initiation of the BRC process, law should establish a strong linkage that bars an interim or temporary storage site from becoming a *de facto* repository. NRDC concurs with the former Chairman of the Energy and Natural Resources Committee who cautioned that interim storage needs to be done “only as an integral part of the repository program and not as an alternative to, or de facto substitute for, permanent disposal.”¹ Such caution is consistent with decades of national policy and the purpose of the Nuclear Waste Policy Act (NWPA), 42 U.S.C. § 10131(b)(1). Indeed, last year we expressed concern that the pilot program in S. 3469 could lessen the impetus for a strong repository program. Unfortunately S. 1240 goes further and effectively eviscerates the link between storage and disposal. This guarantees a repeat of the mistakes we have seen made over the past half century and virtually ensures a moribund repository program. Further, NRDC believes that if S. 1240 becomes law, a future Congress will be forced to deal with this issue once again, with no meaningful disposal solution on the horizon.

After more than 55 years of failure, the history of U.S. nuclear waste policy offers Congress all the lessons it needs and it can ignore them only at its peril. Efforts such as the failed bedded salt repository in Lyons, Kansas (1972) and the 1975 abandonment of the 100-year Retrievable Surface Storage Facility (RSSF) are decades distant, but directly relevant to this Committee's consideration of S. 1240. Adopting a short-term, politically expedient course for interim storage at the expense of durable solutions is the recipe for failure for both storage and disposal facilities. The failed Yucca Mountain project is merely the latest and largest of these debacles. While the BRC rightly recognized the 1987 amendments to the NWPA were “highly prescriptive” and “widely viewed as being driven too heavily by political considerations,” the BRC failed to take into account (or recount) all that has transpired over the past three decades.

Put bluntly, first the U.S. Department of Energy (DOE) and then Congress corrupted the site selection process that resulted in selecting Yucca Mountain as the only option for a deep geologic repository. The original NWPA strategy contemplated DOE first choosing the best out of four or five geologic media, then selecting a best candidate site in each medium. Next, DOE was to narrow the choices to the best three alternatives, finally picking a preferred site for the first of two repositories. A similar process was to be used for a second repository. Such a process, if it had been allowed to play out as intended, would have been consistent with elements of the adaptive, phased, and science-based process the BRC Report later recommended.

But instead, DOE first selected sites it had pre-determined. Then in May, 1986 DOE announced it was abandoning a search for a second repository and narrowed the candidate sites from nine to three, leaving in the mix the Hanford Reservation in Washington (in basalt medium), Deaf Smith County, Texas (in bedded salt medium) and Yucca Mountain in Nevada (in unsaturated volcanic tuff medium). All equity in the site selection process was abandoned in 1987 when Congress, confronted with cost of characterizing three sites and strong opposition to the DOE program,

¹ See <http://www.energy.senate.gov/public/index.cfm/democratic-news?ID=490349a4-4b5e-4ac2-83e7-6e9a54c7aaf0>

amended the NWPA of 1982 to direct DOE to abandon the two-repository strategy and to develop only the Yucca Mountain site. Not by coincidence, at the time Yucca Mountain was DOE's preferred site, as well as being the politically expedient choice for Congress. The abandonment of the NWPA site selection process jettisoned any pretense of a science-based approach, led directly to the loss of support from the State of Nevada, diminished Congressional support (except to ensure the proposed Yucca site remained the sole site), and eviscerated public support for the Yucca Mountain project.

By ending all impetus for the disposal program, S. 1240 risks sending the nation down another dead-end road. But we believe this situation can be rectified. NRDC, relying on decades of scientific consensus, supports the focus of developing geologic repositories and ensuring a strong link between storage and disposal that ensures no storage site will ever become a *de facto* repository. After detailing the shortcomings of S. 1240, we offer specific suggestions for crafting successful, durable legislation and a bill that can address the longstanding national challenge of nuclear waste.

II. Specific Comments on S. 1240 and the Evolution of the BRC Process

A. Comments on Title I: Sections 101-103

Title I of S. 1240 closely tracks last year's S. 3469, which in turn, recognized our generation's ethical obligation to future generations regarding nuclear waste disposal. Unfortunately, subsequent Sections of the bill sever the crucial link between storage and disposal.

As we suggested last fall, the bill should include an explicit adoption of the primary purpose of the Nuclear Waste Policy Act (NWPA), 42 U.S.C. § 10131(b)(1), as the decision to isolate nuclear waste from the biosphere implicates critical issues of security, including: public health, environmental protection and financial security. Also, the meaning of Section 102(4) should be expanded and clarified by removing the word "centralized" and inserting the words "safe, environmentally sound and publicly accepted" to address several of the concepts we detail below.

B. Comments on Title II: Sections 201-206

With respect to creation of a Nuclear Waste Administration, as NRDC has expressed numerous times over past years, the failures of the Atomic Energy Commission and its successor agencies (the Energy Research Development Agency, DOE and the Nuclear Regulatory Commission (NRC)) make the case that an alternative institutional vehicle for nuclear waste disposal is necessary. However, we caution that any new federal entity must be subject to all of the nation's environmental laws, including the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321, *et seq.* We presume such is the case for this proposed agency. Alternative language may be necessary to clarify specific application of NEPA at certain junctures of the siting process (for example, in support of the initial guidelines), but it is clear to us that NEPA has full application to the newly proposed S. 1240. We hope the Committee will speak to this matter in the record of

this proceeding including any report filed with the bill or, better yet, simply clarify the matter in future and improved versions of the bill.

Further, as noted in our introduction, NRDC advises the new nuclear waste entity be governed by a board of directors. The lengthier processes associated with arriving at consensus decisions – as compared to the decision-making capacity of a single administrator – can be painful but are worthwhile in the end. A single administrator can upset carefully crafted disposal progress in one term; a diverse board of directors is less likely to do so. The BRC itself is a good example of the benefits of a group decision-making structure, where a wide array of viewpoints (though not nearly as diverse as we suggested or think was necessary) can and did produce useful results.

In our May 2013 comments on the Discussion Draft of this bill, we stated that representation on this board of directors should be balanced by political party representation, by governmental affiliation (*i.e.*, federal, state, or tribal), and include representation by non-governmental organizations in addition to industry. In addition, in establishing the board of directors of the nuclear waste entity, the legislation should have a provision explicitly prohibiting the majority on the board from comprising members with existing or historical ties to the nuclear industry. Such a requirement would recognize the existing revolving door between government service at NRC, DOE and the nuclear industry. Further, ensuring the board is not disproportionately composed of members with existing or historical ties to the nuclear industry would improve public trust and acceptance of the government's newly legislated nuclear waste storage and disposal program.

We also note with concern changes to Section 205, the Nuclear Waste Oversight Board. Here, the language of Section 205(a) has been substantially refined to focus on financial aspects of the Nuclear Waste Fund, the Working Capital Fund, and the performance of the Administrator in fulfilling contracts. Stressing the importance of the Oversight Board's review of financial aspects seems appropriate, but the potential crucial functions of the Oversight Board – chiefly, review of the progress of nuclear waste facilities – have been relegated to Subsection (m). It is not clear to us why the bill includes this apparent legislative devaluation, especially when the functions delineated by Subsection (m) include oversight of the funds made available to the Administrator, the adequacy of the fees, and the liability of the United States to contract holders. We suggest returning the functions (now in Subsection (m)) to primary placement at the beginning (in Subsection (a)) and deleting the duplicative text of Subsection (a)(1)(A)(B) and (C), saving such admonishment for the Committee Report.

Additionally, it has long been NRDC's view that independent oversight is critical to safe and environmentally sound operation of DOE nuclear weapons production facilities and commercial nuclear facilities regulated by the NRC. Indeed, while creating a review board may be a useful first step, more importantly the full suite of existing environmental laws should have full application to nuclear waste matters, and the new Nuclear Waste Administration should be bound by, and benefit from clearly defined external regulation. We address this issue in more detail, *infra* at 10-12.

C. Comments on Title III –Sections 301-308

As noted in our introduction, disposal of nuclear waste in geologic repositories should remain the core focus of this legislation. Regrettably, by the inclusion of much of “alternative” Section 305 from the Nuclear Waste Discussion Draft,² S. 1240 presents a structure that advantages immediate introduction of interim storage options over development of a sound geologic repository program. As a preliminary matter, we stress NRDC *supports* commencing work on consolidated interim storage with a specific focus on development of an interim storage facility for stranded fuel. Indeed, we have proposed a set of steps to develop such a pilot interim storage option and do so again today, *infra* at 9-10.

(1) Evolution of the Interim Storage Issue Subsequent To The BRC

The nuclear waste legislative process has been moving in the wrong direction. The BRC initially set out a phased, careful approach to developing both repositories and storage sites with strong checks to ensure storage sites could not become *de facto* repositories. This has been transmogrified in S. 1240 to a measure that prioritizes consolidated storage at the expense of a meaningful repository program. In short, NRDC believes that if S. 1240 becomes law, a future Congress will be forced to deal with this issue again, with no meaningful disposal solution on the horizon, but with an even larger burden of radioactive hazardous materials.

S. 1240 lacks, for example, the specific check on the development of interim storage sites pending meaningful progress on the repository program found in Section 306 of last year’s S. 3469. The requirement in Section 306(a) stated: “The Administrator may not possess, take title to, or store spent nuclear fuel at a storage facility licensed under this Act before ratification of a consent agreement for a repository under Section 304(f)(4).” Such a provision wisely put the horse before the cart and ensured the crucial linkage between storage and disposal that the BRC acknowledges is necessary.³ Such language should be included in S. 1240.

² The Nuclear Waste Discussion Draft released by the Committee in March of this year included a proposal for an alternative Section 305 as a suggested replacement of Section 304(b)-(g) of the draft bill. S. 1240 includes the replacement language, and while some elements of alternative Section 305 have been altered in the interim, the majority of the text remains the same.

³ See BRC Final Report at xii, “[A]t the same time, efforts to develop consolidated storage must not hamper efforts to move forward with the development of disposal capacity. To allay the concerns of states and communities that a consolidated storage facility might become a *de facto* disposal site, a program to establish consolidated storage must be accompanied by a parallel disposal program that is effective, focused, and making discernible progress in the eyes of key stakeholders and the public.” See also, “[t]his means that a program to establish consolidated storage will succeed only in the context of a parallel disposal program that is effective, focused, and making discernible progress in the eyes of key stakeholders and the public. A robust repository program, in other words, will be as important to the success of a consolidated storage program as the consolidated storage program will be to the success of a disposal program. Progress on both fronts is needed and must be sought without further delay.” BRC Final Report at 40.

We expressed concern last year with an exception for 10,000 metric tons of spent nuclear fuel destined for storage, and express similar concerns about Section 309 of S. 1245 (Energy and Water Development Appropriations Act of 2014). But the language of S. 1240 merits our outright objection and goes far beyond the careful, phased approach of last year's bill, which very closely tracked the BRC Final Report. Indeed, Section 305 of S. 1240 even does away with the Nuclear Waste Discussion Draft's fig leaf *Suspension For Lack Of Substantial Progress*, severing even the last minimal checks on interim storage in the event no progress is made on a repository, leaving the repository program and storage program on two entirely separate tracks.

(2) A Comparison of S.3469 with S.1240

Sections 304, 305 and 306 of last year's S. 3469 went much of the way toward structuring a result that would avoid repeating the failure of the Yucca Mountain process. The 2012 version of Section 305(a) directed the U.S. Environmental Protection Agency (EPA) to adopt, by rule, broadly applicable standards for the protection of the general environment from offsite releases from radioactive material in geologic repositories. Further, last year's Section 305(b) directed NRC to then amend its regulations governing the licensing of geological repositories to be consistent with any relevant standard adopted by EPA. These requirements and this phasing of agency actions in S. 3469 were appropriate (*i.e.*, first EPA sets the standards and then NRC ensures its licensing process meets those standards). In our earlier testimony on S. 3469 we expressed concern that the timeline for this phasing was inadequate, but those were concerns we hoped could be addressed in a later version of that bill. Unfortunately, Section 307 of S. 1240 does not even approximate such requirements, and also ignores the BRC's recommendation that new, applicable rules be in *final* form before site selection.

Further, S. 3469's Section 304, the heart of the BRC's original template, set forth a clear, linked and strongly similar process for the development of *both* interim storage sites and repositories. The original Section 304(a) set out the general terms of a process that reflects the transparent, adaptive, consent-based qualities called for by the BRC. Allowing affected communities to decide whether, and on what terms, they would host a nuclear waste facility was an important step forward that has not previously existed in nuclear legislation. S. 3469's Section 304(b) wisely provided for consistency with Section 112(a) of the NWPA but required the issuance of guidelines not later than one year after the date of enactment of the Act. We thought this one-year period was insufficient, but supported such consistency with the enumerated provisions in Section 112(a). Last year's Section 304(c) set up a process for determining candidate sites that, in general terms, could chart a process arriving at protective disposal solution, if it were: (1) undertaken subsequent to imposition of sound final site screening and development criteria and sound final generic radiation and environmental protection standards; and (2) not hamstrung or corrupted by Congress, other federal agencies or the Executive Branch. And Section 304(f) designed a consent process applicable to both storage and disposal sites.

Ultimately, last year's bill, S. 3469, was attentive to BRC's recommendation of a "consent-based, adaptive, and phased approach" for developing geologic disposal options. We agreed with the general thrust of such a conceptual framework for developing repositories, but suggested that

any such “consent-based” process would enjoy a far higher probability of success in concert with a simple, but profound, change in the law – Congress with its firm understanding of federalism, should legislate a role for states in nuclear waste disposal by amending the Atomic Energy Act (AEA) to remove its express exemptions of radioactive material from environmental laws. We discuss this further below.

(3) The Failure to Link Storage And Disposal In S. 1240

We turn now to the analogous Sections in the current bill, S. 1240, and the contrasts are dismaying. The basic structure of the template from S. 3469 is scattered in pieces throughout the current bill, and the development of repositories and interim storage facilities have been placed on very different tracks.

We find that Section 304 of S. 1240 has been truncated even compared to the Discussion Draft and reduced to mere aspirations it will structurally no longer be able to achieve. Section 305 spells out the new process for Interim Storage facilities, in great measure modeled on the “alternative” Section provided with the Discussion Draft. Section 305 of S. 1240 requires requests for proposals (RFPs) for interim storage sites not later than 180 days after enactment, likely before an Administrator is even confirmed by the Senate. The RFPs shall include general guidelines and, after one or more public hearings, a process for site characterization, selection, and licensing. Remaining links between storage and disposal are found in Section 305(c), where the Administrator is urged (in the wispiest terms) “to seek to ensure” that efforts to develop a storage site for “nonpriority” waste are accompanied by parallel efforts to develop a repository.

In S. 1240, during the first 10 years after enactment, the Administrator may issue RFPs for one or more storage sites for non-priority waste, but may not issue additional RFPs unless the Administrator has obligated funds for activities in the repository program. After the first 10 years, the Administrator may not issue additional RFPs for non-priority waste storage unless there is a repository site under evaluation. There is no volume limit for the non-priority storage site in either case.

And priority and preference in site selection for sites suitable for co-location of a storage facility and a repository provide cold comfort for the following reasons. Unfortunately, preference and priority for co-location are not articulated as binding factors, no matter how moribund a repository program. And even if they were meaningfully binding, which they are currently not, such preference presents a host of problems that could lead to the consolidated storage site morphing into the *de facto* repository, regardless of the progress in the repository program (if, *e.g.*, the co-located repository program derails late in the process for technical or institutional reasons). Further, there is nothing in Title III barring the construction and operation of facilities for repackaging nuclear spent fuel and nuclear waste, which could include construction and operation of facilities for spent fuel reprocessing (chemical or metallurgical). Indeed, NRDC is already aware of multiple efforts and interest in co-locating storage and reprocessing facilities.

In summary, there is nothing in S. 1240 to halt a governor interested in hosting a potentially unlimited interim storage site and associated reprocessing facility from putting the process on a fast track before EPA's new radiation protection rules and NRC's new licensing rules are in place; before a repository program has even commenced meaningful work; and indeed, potentially before submission of the final "Mission Plan" described in Section 504. Whether such a situation could emerge in Idaho, New Mexico, Tennessee, South Carolina, or other states, or even at Nevada's Yucca Mountain (with attendant controversy and rancor) is beside the point because the phased, careful process designed to achieve a publicly acceptable result outlined by the BRC and included in last year's S. 3469 has been jettisoned by S. 1240's prioritizing of interim storage.

(4) The Consent Agreements of Sections 305 And 306 Are Inadequate

The siting and consensus approval for storage and repository facilities should be strongly consistent, if not identical. For storage facilities, there is the possibility, but not the requirement, of a "cooperative agreement" in Section 305(b)(3)(C). The consent process should require this minimal, initial agreement. The consent process of Section 305(b)(4)(B) includes no provisions related to the contents or terms and conditions of a consent agreement as were included in S. 3469. In addition to the lack of adequate technical requirements, this lack of an adequate consent process is contrary to the purpose of "establish[ing] a new consensual process" (Section 102(3)) and makes it unlikely that there will be successful siting of storage facilities.

The consent process for repositories still exists in Section 306(e) of S. 1240. But the ratification requirement of S. 3469 Section 304(f)(4) is missing. Apparently, Congress could, at any time, choose not to ratify the consent agreement, or ratify it with changed conditions, or not provide funding or allow other provisions to be implemented. It is not clear to NRDC why any state would consider this to be an adequate "consent" process, when its requirements could be arbitrarily overturned by Congress.

D. Comments on Title V – Sections 501-509

Unfortunately, the timeline found in the "mission plan" also do not provide a meaningful linkage between storage and disposal. In brief, the "mission plan" is the report required under Section 504, presented to Congress, the Oversight Board, the NRC, the Nuclear Waste Technical Review Board, and then released for public comment. All this is to be done in short order. The proposed mission plan is due not later than one year after the date of enactment of S. 1240. There is no specific date for final issuance, and there is provision for revision to reflect major changes, including from the "consent" process in the planned activities, schedules, milestones, and cost estimates reported in the mission plan.

The pertinent dates of the mission plan are found in Subsection (b), where the Administrator is to set out schedules for operation of a pilot facility not later than December 31, 2021; a storage facility for "nonpriority" waste not later than December 31, 2025; and a repository not later than December 31, 2048, likely more than three decades distant from the passage of any iteration of

the Nuclear Waste Administration Act. Any analysis of “meaningful” progress on the repository during the first few years subsequent to the Act’s enactment is meaningless when weighed against a scale of more than 3 decades. Further, the allowance for revision of the mission plan can be used to simply shunt aside observations about problems in repository development or rapid development of the interim storage sites.

The certification process and suspension proceedings in Subsections (c) and (d) could prove to be politically fraught, but ultimately meaningless in light of the time frames. Rather than the hard cap on volume present in last year’s S. 3469 or, as NRDC suggests, an interim storage pilot project at operating commercial site(s) limited to the stranded fuel, S. 1240 sets out a functionally meaningless process that requires the Administrator to move quickly with consolidated interim storage and posit (likely rosy) scenarios about repository development decades away.

III. How the Evolution of the BRC Process Can Be Saved: NRDC’s Prescription

The Committee has the ability to reinstate the primacy of geologic repositories as the solution for nuclear waste and to ensure strong linkage between storage and disposal that ensures the former never become *de facto* disposal sites. NRDC and many others could support such legislation.

NRDC offers five recommendations to finally provide durable legislation for nuclear waste. They are: (1) recognize that geologic repositories must remain the core 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 last year’s S. 3469; and (5) exclude distracting and polarizing closed fuel cycle and reprocessing options.

Importantly, our view on each aspect is premised on a single overarching caution: to avoid repeating the mistakes of the last three decades, whether in siting a repository or developing interim storage options, Congress must create a transparent, equitable process incorporating strong public health and environmental standards insulated from political expediency or other distortions. That would ensure, at the conclusion of the process, the licensing of a suitable site (or sites). What follows is NRDC’s detailed prescription for amending S. 1240 and establishing a protective and robust nuclear waste storage and disposal process.

A. Geologic Disposal Must Remain Primary

The primacy of geologic disposal as the solution for nuclear waste is consistent with more than 50 years of scientific consensus and, most recently, with the findings of the bipartisan BRC. No other solutions are technically, economically or ethically viable over the long term for the environment and human society. NRDC strongly supports the development of a science-based repository program that acknowledges the significant institutional challenges facing spent fuel storage and disposal. Advancing S. 1240 without reinstating the primacy of geologic disposal as

the solution would gravely harm collective efforts to establish lasting solutions for nuclear waste and would be contrary to the efforts of the BRC.

B. Create a Coherent Legal Framework before Site Development

We have described the basis for this already in our discussion of S. 3469's Section 305 and do not need to belabor the point, *supra* at 5. Quite simply, if Congress ensures that rules for developing nuclear waste facilities are in place before the selection of sites begins, it will forestall a host of problems likely to emerge down the road. We only need reflect on this history of Lyons, Yucca Mountain, Monitored Retrievable Storage, and many other failed attempts.

C. Address Interim Storage in a Phased Approach Consistent With the BRC

We commence by reminding the Committee that the United States attempted to sever the link between interim storage and final disposal previously, only to conclude doing so was a mistake. Beginning in 1957, the Atomic Energy Commission (AEC) pursued a geologic repository program for high-level radioactive waste (HLW) in a salt deposit near Lyons, Kansas. Opposition initially came from the Kansas Geological Survey but soon spread. 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 abandon the site in 1972. Following the demise of the Lyons repository effort, later in 1972 the AEC announced it intended to develop a 100-year Retrievable Surface Storage Facility (RSSF). The U.S. Environmental Protection Agency (EPA) and others opposed this interim storage proposal because it diverted attention and resources from efforts to find a permanent geologic disposal solution. As a consequence of this opposition, the Energy Research and Development Agency (ERDA) abandoned its plans for a RSSF in 1975. The similarities of this history with failed attempts to force acceptance of the proposed Yucca site should be apparent.

We now offer four observations on interim storage:

- 1.) Consolidated storage of spent fuel from currently operating reactor sites at an alternate, previously greenfield site is unnecessary and ill-advised. Any pilot project for consolidated storage should be limited to hardened, dry-cask storage of stranded spent fuel from shut down reactor sites.
- 2.) If emergency conditions arise at an existing operating reactor site, *e.g.*, due to an earthquake, discovery of a fault under the reactor(s), or a disaster related condition, that threatens the environment and public health, the reactors should be shut down and the spent fuel at the site would qualify as stranded spent fuel.
- 3.) Existing and currently operating reactor sites have government and implicit public consent for interim storage of spent fuel.
- 4.) Consolidated spent fuel storage should not be viewed as a step toward, or means of furthering, spent fuel reprocessing.

With those observations in mind, NRDC urges the Committee to write legislative language for a pilot project to address the total stranded spent fuel at closed reactor sites (currently 13 sites), currently defined in S.1240 as “priority fuel,” where spent fuel would be stored in dry casks within one or more hardened buildings similar to the Ahaus facility in Germany. Potential volunteer sites already demonstrating “consent” are found at operating commercial reactors. The utility of using existing commercial operating reactor sites rather than burdening new areas with spent nuclear fuel should be apparent: existing sites require far less new infrastructure, already have the capacity for fuel management and transportation and have the consent necessary for hosting nuclear facilities. And by keeping consolidated, interim-stored spent nuclear fuel under the guardianship of the nuclear industry that produced the waste in the first instance, Congress ensures that careful progress continues with the repository program because all parties will know that it is necessary.

Further, S. 1240 is silent on an important matter – the current configuration of spent fuel storage at a number of operating reactor sites. The BRC cited no evidence for why continued reliance on densely packed wet storage should be accepted as adequate in light of the health, safety and security risks that interim wet storage poses. This is true regardless of the seismic, population density, or other natural factors that might create concern with the current storage configuration. NRDC and our colleagues at the Union of Concerned Scientists and many others noted the BRC was negligent in not recommending that Congress statutorily direct movement of spent fuel from wet pools to dry casks as soon as practical, *i.e.*, as soon as spent fuel has cooled sufficiently to permit safe dry cask storage, generally about five to seven years following discharge from the reactor. We again urge Congress to act on this issue in this legislation or even in a stand-alone bill.

To reiterate, a pilot interim storage project housed at an existing commercial reactor site that addresses issues of stranded fuel would go far in dealing with a number of public safety and environmental harms, would do no damage to a carefully constructed bill that focuses on repository development.

D. Consent, Federalism, and a Fundamental Change In Law

(1) The Consent Agreements Suggested by BRC and Found In Section 306 Are Inadequate To the Task.

For all its laudable qualities, we believe the consent agreements in Section 306 (for repositories and not for storage sites) will not solve the fundamental problem facing nuclear waste disposal nor allow States the oversight role necessary to create a durable, lasting solution. Rather, Congress, with its firm understanding of federalism, should legislate a role for states in nuclear waste disposal by amending the Atomic Energy Act (AEA) to remove its express exemptions of radioactive material from environmental laws.

State, local and tribal governments must play a central role for a repository and waste storage program to be successful, and regrettably in S. 1240 they cannot. The BRC recognized as much

and noted that federal and state tensions are often central to nuclear waste disputes. We note that 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.

Final Report at 56 (citation omitted).

Without fundamental changes in S. 1240 to address such federal, state and tribal tensions, we will never approach closure and consent on transparent, phased, and adaptive decisions for nuclear waste siting. Indeed, even if such a provision as Section 306(e) were enacted, we think it likely disputes will continue unchecked, including as the Administrator and state and local governments seek to negotiate a consent agreement, unless Congress finally makes a decades-overdue change in the law.

(2) NRDC's Prescription for Ensuring States' Authority – Remove the AEA's Exemptions from Environmental Law

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 the Resource Conservation and Recovery Act (RCRA) are at the foundation of state and, we submit, even fellow federal agency distrust of both commercial and government-run nuclear complexes.

As the Senate 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 only able to push for adequate cleanups at 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 currently active site (Final Report at 21). 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 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 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 the Nation 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 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.

Section 306(e) allows a consent agreement with terms and conditions including "regulatory oversight authority." The attempt to remedy regulatory deficiencies could be more simply and effectively handled by ending exemptions under the AEA. Removing the ability of the United States to unilaterally break the terms of the consent agreement could potentially give a state some measure of comfort that the agreement it had painstakingly negotiated over "undue burdens" or conflicting compliance agreements will hold fast. But there would be nothing stopping Congress from revisiting this law, ratifying the consent agreement 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.

By contrast, 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.

E. Exclude Distracting and Polarizing Closed Fuel Cycle and Reprocessing Options

The unlimited interim storage allowed for in S. 1240, regardless of the state of repository program, is a course of action benefitting the narrow financial interests of industry, and it undermines final repository solutions, and sets up a clear set of incentives for reprocessing and fast reactors. This is an enormous step back from S. 3469. Last year former Chairman Bingaman noted:

The Commission wisely resisted the allure of reprocessing, concluding that there is “no currently available or reasonably foreseeable” alternative to deep geologic disposal. In short, we need a deep geologic repository. 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.

NRDC concurs. The lack of a limit on consolidated interim storage increases the probability of continued efforts at reprocessing the spent fuel, resulting in plutonium separations with no way to ensure that the plutonium would not be used to make nuclear weapons. Inclusion of incentives for reprocessing and fast reactors would necessitate NRDC’s further objection to such nuclear waste legislation. In addition, reprocessing has proven to be expensive, environmentally disastrous, and a serious non-proliferation threat. And as the BRC found, reprocessing is also not a viable waste management strategy because it does not significantly reduce the radioactivity of the waste that must be stored in a repository. Indeed, just as for spent fuel, we must also work to resolve the path to a repository for the millions of gallons of dangerous, highly radioactive waste generated by spent nuclear fuel reprocessing in the United States over the past half century.

In contrast to this setup for reprocessing and fast reactor facilities, NRDC’s recommendation of an interim storage pilot project that is strictly limited to existing commercial operating sites avoids the likelihood that reprocessing would occur. First, our consolidated pilot proposal gets the ball rolling on spent fuel almost all parties agree is “stranded.” Second, with its strict limit to shut down reactors and careful attention to establishing appropriate safety criteria, any such interim site could solve immediate public safety risks but not take the air out of meaningful progress geologic repository program.

IV. Conclusion

We share the frustrations of the Committee and the bill’s sponsors with the halting pace of efforts to find a disposal solution for nuclear waste. But we urge you to not let such frustration result in short-sighted “solutions” such as those found in S. 1240.

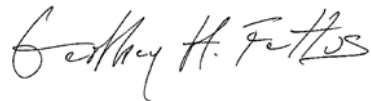
Efforts to “streamline,” “reduce regulatory obligations” or simply force through projects by setting arbitrary deadlines, are in significant measure how the original NWPA process and then the Yucca project were derailed. Rather than trying to short circuit an imaginary parade of onerous regulatory obligations, NRDC urges careful attention to creating a coherent legal framework before commencing *any* geologic repository or interim storage site development process. Then (and only then) will it be possible to have a consent-based approach for nuclear waste storage and disposal consistent with our history of federalism.

Simply, NRDC opposes interim storage configurations that remove the necessity of a repository program and provide clear incentives for reprocessing and fast reactors. Further, relying on the two-track storage and disposal process presented in S. 1240 to provide the meaningful oversight

role States seek is another recipe for gridlock –there is no provision in the storage Section for a consent agreement and the provision in the repository Section does not bar Congress from revisiting any negotiated agreement, ratifying the consent agreements with conditions, and removing whatever meaningful restraint a state might assert. This is a recipe for failure as highlighted by an ongoing example. The Energy Department’s current effort to reclassify high-level radioactive waste and ship it to the Waste Isolation Pilot Plant (WIPP) in New Mexico illustrates just how an agency can and will take such liberties (and simultaneously not solve any of the pressing problems at the Hanford site).

In contrast to the difficulties in structuring state and federal roles noted above, ending the anachronistic AEA exemptions solves the matter of meaningful state oversight once and for all. It is past time for Congress to take such a step and this is the legislation where it should finally be done.

We look forward to continuing to work with the Committee on this difficult topic and I am happy to answer any questions.



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