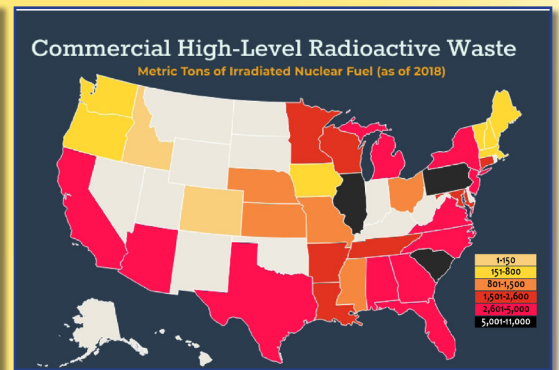
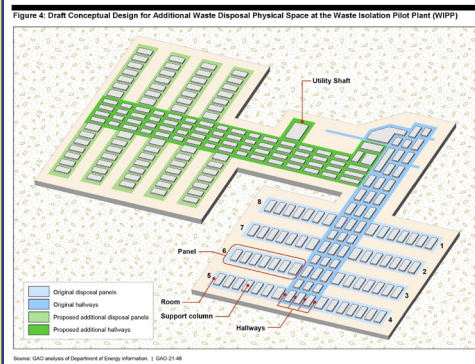
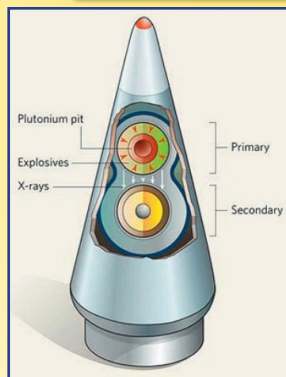


# Safety, Security, and Savings

Recommendations from communities across the US nuclear weapons complex to enhance safety and security while saving billions



ALLIANCE FOR NUCLEAR ACCOUNTABILITY  
APRIL 2021

# Weapons and Waste: Safety, Security and Savings

The United States is best served by a nuclear weapons policy that is neither provocative nor aggressive and a nuclear waste policy that prioritizes health and safety for the lifetime of risk, recognizing that investing in cleanup now will save tens or hundreds of billions of dollars down the road.

In the same way that the risks presented by nuclear weapons and nuclear wastes are bi-partisan—incapable of distinguishing Republican from Democrat or, for that matter, allies from enemies—the recommendations of the Alliance for Nuclear Accountability are neither partisan nor party-specific. They apply no matter who occupies the White House or which party holds the balance of power on Capitol Hill.

The Biden Administration and the 117<sup>th</sup> Congress face the same challenges that have confronted previous governments. Achieving safety and security in the nuclear arena will require a re-thinking of long-held assumptions and practices. Today, many Cold Warriors argue that the policies of the past—deterrence based on mutually assured destruction and the pursuit of nuclear advantage through a global nuclear arms race—are counterproductive; that is, they undermine rather than support our security goals.

At the same time, the entry into force of the Treaty on the Prohibition of Nuclear Weapons challenges nuclear-armed states and their allies to re-examine the role of nuclear weapons in policy and practice. The COVID-19 pandemic begs for a reassessment of the nation's security priorities and challenges the government to realign spending to meet real threats being experienced on the ground. Finally, a new nuclear posture review will provide an opportunity for the US to establish policies and practices that better serve our security goals in both the short and long term.

What follows is a series of brief articles addressing the significant challenges that have not been resolved by the policies and practices of the past. We will examine and make recommendations about weapons and waste.

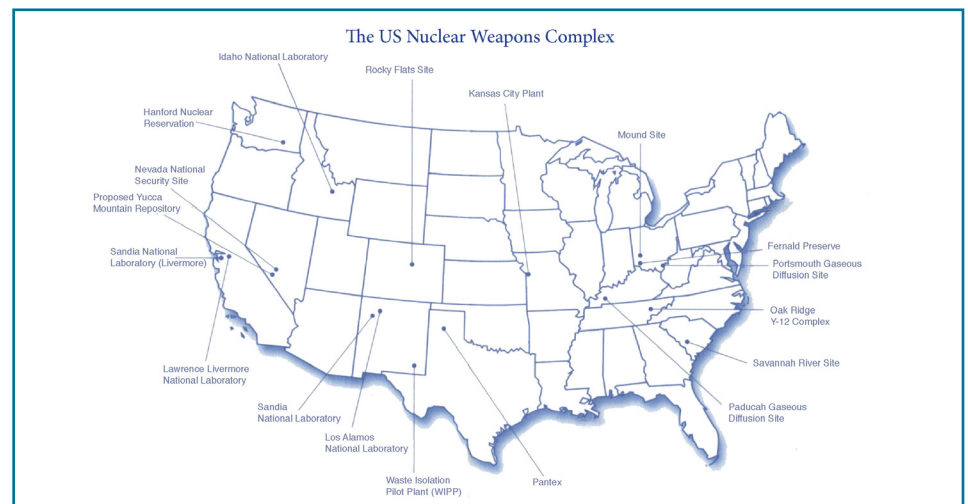
The Nuclear Weapons articles will

address new warhead and bomb production under the guise of “Life Extension Programs,” and will ask why the US is pursuing an expensive, unnecessary, and provocative plan to expand the nuclear weapons production infrastructure to enable production of 80 new warheads per year for decades to come. Finally, the weapons section reflects on US nuclear policy in the changing arena of international law, examining our current treaty obligations and looking forward to the implementation of the Treaty on the Prohibition of Nuclear Weapons.

The section on Waste and Cleanup will look at the inadequacies of current US

plans for handling, storing, and disposing of dangerous radioactive wastes and will describe better, safer options for management and storage. We will also examine the Department of Energy's perennially underfunded cleanup program and look at the enduring and expensive consequences—in dollars and in risk to humans and the environment—of failing to implement effectively managed cleanup programs and projects.

Each article includes analysis and recommendations based on decades of experience monitoring and engaging decision makers at the Department of Energy and in Congress.



**THE ALLIANCE FOR NUCLEAR ACCOUNTABILITY** is a thirty-four year old collaboration of grassroots groups at current and former nuclear weapons sites around the country and national organizations that address nuclear issues. Our expertise is hard won; we live with the results of decisions being made about siting nuclear weapons production facilities and dealing with the public health threats, environmental contamination, and legacy wastes from past practices. ANA works at local, regional, state and national levels to address health and safety issues at Department of Energy/National Nuclear Security Administration sites for workers, the public, and the environment. Our work addresses nuclear weapons design, engineering, production, and testing activities taking place at facilities in our neighborhoods as well as the challenges facing our communities and the country from cleanup operations and waste management, processing, storage and disposal.

## “Life Extension” Program = New Warheads

The country’s present inventory of more than 5,000 nuclear weapons has been extensively tested and certified reliable, and it will be for decades to come. The escalating cost of maintaining the stockpile is not due to difficulty or the effects of aging. Rather, it is caused by elective changes introduced into the stockpile as part of NNSA’s Life Extension Program. Over the past decade, LEP has become a misnomer; the program is being used not to extend the life of current warheads, but to develop wholly new warheads.

The unchecked desire of the weapons labs to create new weapons with novel features is a primary factor in the push to upgrade other parts of the nuclear enterprise. The cost of modernizing the stockpile, including infrastructure and delivery systems, is \$2 trillion over 30 years with a modest rate of inflation.

The 2018 Nuclear Posture Review added new warheads, halted a planned megaton-bomb retirement, and expanded the role of nuclear weapons. These actions, along with other US modernization efforts, have triggered a new global nuclear arms race.

The current Administration has announced it will conduct a new nuclear posture review. Congress should, at a minimum, pause FY22 funding for new and modified nuclear weapons while the review is in progress.

Last year, while most parts of the federal budget were being slashed, the Administrator of the National Nuclear Security Administration prevailed on the Trump White House to increase the budget request for nuclear weapons activities by 25%, to \$15.6 billion. She was successful. Despite a reported surplus of up to \$8 billion in NNSA’s Prior Year Balances account, Congress approved \$15.3 billion. There was no justification for this massive increase; it was a deep, quick dive by the weapons contractor community to get it while they could.

As Congress considers the FY22 budget, it is important that the bloated \$15.6 billion not become the new baseline for NNSA weapons program funding. By spending only what is needed to maintain

the stockpile in its current reliable state, rather than pursue new warhead designs, Congress can put the brakes on the nuclear arms race, make our nation safer and more secure—and save billions of dollars in the process!

Weapons systems that should be re-examined, with funding paused pending the nuclear posture review:

- The W87-1. This is a new-design weapon with wholly new components intended to replace the W78, and will sit atop a new land-based missile called the Ground Based Strategic Deterrent. A GAO September 2020 report raised numerous red flags and pegged the warhead cost and desired features at about \$15 billion. The W87-1 is a main driver for expanded pit production. Its novel design may complicate certification and add to pressures to resume nuclear explosive testing. Eliminating the warhead would save \$15 billion; eliminating GBSD would save another \$100 billion in acquisition fees alone.

- The W93. This is a new-design submarine-launched warhead that lacks justification. U.S. submarines patrol with two designs, and both have been upgraded recently. The United Kingdom, which relies on US warhead designs and leases US missiles, plans to increase the “ceiling” for its stockpile. The extent to which UK “needs” are driving W93 development is unclear at best. Eliminating the W93 would save \$15 billion.

- The new warhead for a new Sea-Launched Cruise Missile (SLCM-N). This new warhead is a product of the 2018 nuclear posture review. It received \$5 million in FY20 for an initial assessment, with plans to begin funding weapons development in the FY22 request. The prior SLCM-N, retired in 1992 by President George H. W. Bush, should not be revived.

In addition, the Administration and Congress should follow through on the



*Examples of recent LEP/warhead development efforts.*

planned retirement of the 1.2 megaton B83 bomb, a plan that was halted in the 2018 Nuclear Posture Review.

### RECOMMENDATION

**Congress should stop funding novel, untested, risky warhead designs; the Administration’s posture review should foreswear them.**

### LEGISLATION

- Rep. Joe Courtney introduced H.R.1554 in March 2021 to prohibit funding for a nuclear armed-sea launched cruise missile and its associated warhead. Presently it has 14 cosponsors. Sen. Chris Van Hollen introduced S.595 in March 2021 for the same purpose. Presently it has 9 cosponsors.

- Rep. Ro Khanna introduced H.R.2227 with 13 original cosponsors in March 2021 to prohibit funding for the Ground-Based Strategic Deterrent Missile and its W87-1 warhead. Senator Ed Markey introduced S.982 in March 2021 with 3 original cosponsors for the same purpose.



# Just say “No” to new bomb plants

The components of a modern nuclear weapon are: a plutonium pit (trigger), thermonuclear secondary, and a non-nuclear package (electronics, etc.), along with high explosives, and a delivery vehicle.

The United States lost the capacity for industrial-scale production of plutonium pits in 1989 when the Rocky Flats Plant near Denver, Colorado, was shut down because of environmental crimes. In 1996, pit production was relocated to the Los Alamos National Laboratory, but production capacity was capped at 20 pits per year.

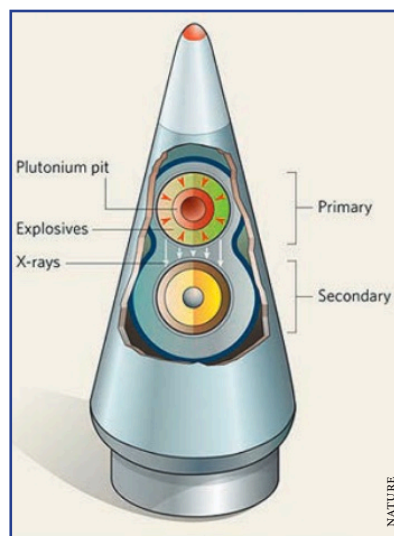
In May 2018 the National Nuclear Security Administration announced it will produce at least 30 pits per year at LANL and at least 50 more pits per year at the Savannah River Site in South Carolina, a site that has never before produced

capacity in both South Carolina and New Mexico.

Expanded production is for new nuclear weapons designs that could push the US back into testing.

Any change in pit production capacity requires nationwide public review under the National Environmental Policy Act. Congress should require completion of a Programmatic Environmental Impact Statement on expanded pit production before funding the program.

Given that the Biden Administration’s pending nuclear posture review is likely to revisit the question of pit production needs, Congress should at least hit the pause button on funding for a \$43 billion program that is not intended to maintain the nation’s nuclear stockpile.



The commitment to modernizing the US nuclear weapons complex and expanding production capacity to produce new weapons is not only expensive, it has triggered a global nuclear arms race. It is a dream come true for the usual contractors at US nuclear weapons production sites.

The federal government has still not leveled with US taxpayers about the total expense of expanded weapons

production even as it fails to cleanup its Cold War mess. For example, NNSA plans to annually process some 250 metric tons of depleted uranium for new nuclear weapons at the Portsmouth uranium enrichment plant in Ohio. The Government Accountability Office reported that DOE has underestimated cleanup costs at its three uranium enrichment plants by \$20 billion.

Annual funding for production programs at the Pantex Plant involving high explosives and final nuclear weapons assembly has increased by 50% over the last decade to \$992 million in FY 2021. Pantex’s last site-wide environmental impact statement was in 1996.

Investment in new and expanded capacity to produce nuclear weapons components throughout the rest of this century undermines US claims of leadership in global nonproliferation and wastes many billions of taxpayer dollars.

By reining in the NNSA’s unwarranted modernization program, Congress can increase safety, enhance security, put the brakes on the global nuclear arms race, and save billions of taxpayer dollars at the same time.

### RECOMMENDATION

**Congress should not fund new or expanded bomb production capacity.**

plutonium pits. In FY 2021 NNSA increased its “Plutonium Modernization” budget by 70% to \$1.4 billion, a figure that includes \$442 million to repurpose the failed MOX Facility at SRS for pit production.

There is no need to expand plutonium pit production. Twenty thousand existing pits are stored at the Pantex Plant near Amarillo, Texas. Pits last at least a century, with the oldest pits in the active stockpile now less than 45 years old. In 2015 Congress told NNSA to expand pit production capacity to 80 pits/year not to address problems resulting from an aging nuclear stockpile, but as a hedge against vague “future geopolitical risks.”

Despite the fact that no future pit production is scheduled to maintain the safety and reliability of the existing nuclear weapons stockpile, NNSA intends to spend at least \$43 billion dollars over the next 30 years to build a new production facility at SRS, upgrade existing facilities at LANL and unnecessarily expand pit production

### ACROSS THE COMPLEX

The Uranium Processing Facility (UPF) at the Y-12 Plant near Oak Ridge, TN, is scheduled to begin production of new thermonuclear secondaries in FY 2026. When NNSA tells Congress that it is building the UPF on time and budget, it omits the parts about how it dramatically downsized the UPF, and will continue many dangerous highly enriched uranium operations for more than twenty years in buildings that fail to meet environmental and safety standards. This decision moved hundreds of millions of costs off the UPF books and places workers, the environment, the community of Oak Ridge, and the US nuclear weapons production program in jeopardy.

Less than ten years after building the new Kansas City Plant for production of nonnuclear components, NNSA plans to double its workforce and add another 250,000 square feet of production space. This upscaling of operations reflects the pace of modernization.

# Nuclear Weapons and the Rule of Law

On January 22, 2021, the Treaty on the Prohibition of Nuclear Weapons entered into force. Because the United States has neither signed nor ratified the treaty, it has no legal authority here. But 122 nations voted to approve the treaty in 2017; with 87 signatory states and 54 ratifying states, the treaty exerts moral force that does not stop at national boundaries.

The TPNW shares a common goal with the Treaty on the Nonproliferation of Nuclear Weapons which the United States signed in 1968 and ratified in 1969—both treaties seek the complete elimination of nuclear weapons.

The principle difference between the two treaties is the difference between aspiration and accomplishment; in 1970, the United States promised to pursue a cessation of the arms race and a treaty on complete disarmament “at an early date.”

That promise was at the heart of the opinion issued by the World Court in 1996 when it was asked whether the use or threat of use of nuclear weapons was illegal. In its decision, the fourteen member court unanimously held that nuclear weapons nations have an obligation not only to pursue, but to achieve nuclear disarmament.

The new treaty bans nuclear weapons outright—their development, testing, possession, use or threat of use, acquisition, and transport; it also forbids assistance to any nation seeking to undertake prohibited activity.

The new treaty also has positive obligations—states parties to the TPNW are required to address the lasting effects of nuclear weapons use and testing by providing care to affected parties and communities and taking steps to remediate environmental damage.

The broad support for the TPNW is a reflection of the non-nuclear states’ determination to put pressure on the nuclear-armed states to free the world from the existential threat posed by nuclear weapons.

Across the US on January 22, 2021, more than one hundred actions took place marking the entry into force of the TPNW and calling on the United States to join the treaty. The Treaty has energized campaigns around the world calling for companies and financial institutions to divest from nuclear weapons. Those efforts are now gaining momentum in the US.

Among them is a campaign to get cities, elected officials, and legislators to pledge to support the Treaty. The Legislator’s pledge has already been signed by ten members of Congress.

The TPNW arrives at a critical moment in history. *The Bulletin of Atomic Scientists* has set the hands of the Doomsday Clock at 100 seconds to midnight, indicating the threat to humankind is greater than at any time in the atomic age.

At the same time, Democratic and Republican administrations are doubling down on nuclear weapons, committing to a “modernization” plan that will cost two trillion dollars over the next thirty years. This commitment has provoked a similar determination in Russia and China—we are now in a new, stunningly expensive, and terribly perilous nuclear arms race.

This arms race is not driven by security requirements. In fact, as the threat of nuclear annihilation increases, we will become less and less secure.

Throughout the course of history, some weapons have been recognized as transgressing the bounds of morality and the rules of warfare: cluster munitions, land mines, chemical, biological and gas weapons. These weapons are now banned because they cannot be contained on the field of battle; in many cases, their effects cannot be limited in time; and they cannot distinguish combatants from noncombatants. They kill everyone, cruelly and indiscriminately.

Nuclear weapons, of course, violate all of those boundaries, and that is a central recognition of the TPNW. Military, political, or diplomatic rationales for nuclear weapons cannot withstand the simple weight of humanitarian arguments.

In this moment, bold leadership is needed to chart a new course, one that steps back from the edge of the abyss. That leadership can take the form of signing the Legislator’s Pledge—a first step in aligning US policy and practice with the aspiration of the rest of the world, a future free from nuclear weapons.

As Senator Sam Nunn, erstwhile chair of the Armed Services Committee has said, speaking of the journey toward a nuclear weapons free world: “Just because we cannot now see the top of the mountain does not mean we should not take the first steps.”

## RECOMMENDATION

**Members of Congress should demonstrate leadership in the quest for a safe and more secure world by signing the ICAN Legislators’ Pledge.**

**ICAN**  
LEGISLATORS' PLEDGE  
FOR THE TREATY ON THE PROHIBITION OF NUCLEAR WEAPONS

**ABOUT THE PLEDGE**  
This Pledge is a commitment by legislators and parliamentarians around the world to work to promote the signature and ratification of the Treaty by their respective countries.

**WHO CAN SIGN**  
Any current member of a national, state/provincial, or regional parliament or congress may sign the Pledge. It is open to legislators and parliamentarians from all countries.

**HOW TO SIGN**  
To add your name to the Pledge, please email: [info@icannw.org](mailto:info@icannw.org)

We, the undersigned legislators, warmly welcome the adoption and entry into force of the Treaty on the Prohibition of Nuclear Weapons as a significant step toward the realization of a nuclear weapon free world.

We share the deep concern expressed in the treaty about the catastrophic humanitarian consequences that would result from any use of nuclear weapons, and we recognize the consequent need to eliminate these inhumane and abhorrent weapons.

As legislators, we pledge to work for the signature and ratification of this landmark treaty by our respective countries. We consider the abolition of nuclear weapons to be a global public good of the highest order and an essential step to promote the security and well-being of all peoples.

NAME \_\_\_\_\_ DATE \_\_\_\_\_  
SIGNATURE \_\_\_\_\_ COUNTRY \_\_\_\_\_  
EMAIL \_\_\_\_\_

## Forever WIPP?

The Waste Isolation Pilot Plant (WIPP) is the only operating deep geologic nuclear waste repository in the world. The 27 years between its siting in New Mexico in 1972 and the arrival of the first plutonium contaminated transuranic waste in 1999 were filled by studies, hearings, protests, construction, lawsuits leading to agreements and the WIPP Land Withdrawal Act that established disposal volume limits. Major provisions of the Act include:

- The state of New Mexico regulates all waste under the Resource Conservation and Recovery Act (RCRA),
- WIPP would receive from Department of Energy (DOE) sites up to 6.2 million cubic feet (175,564 cubic meters) of defense transuranic waste generated during the Cold War,
- No spent nuclear fuel, high-level waste, or commercial waste was allowed,
- WIPP would have a limited lifetime (the WIPP Permit states waste receipt ends in 2024), and
- There would be other nuclear waste repositories.

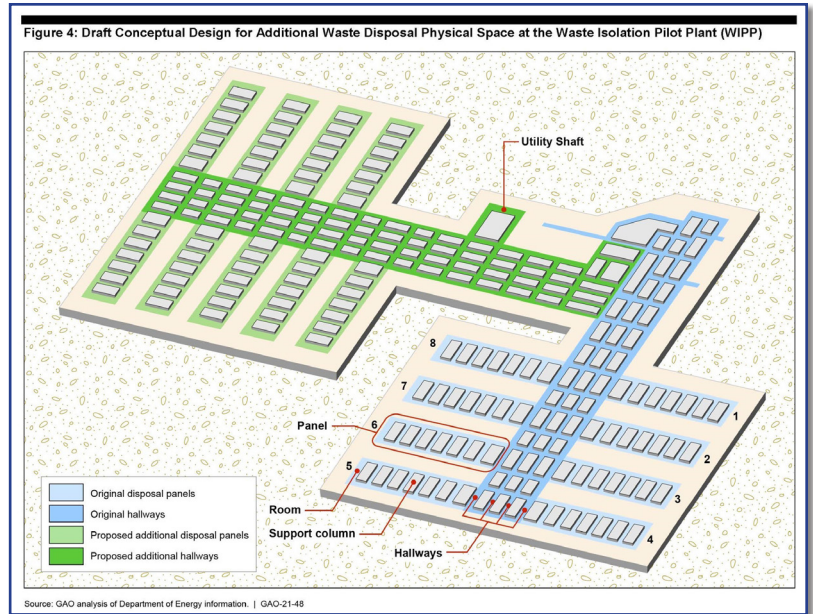
The laws, agreements, and promises are part of the legal, political and social contract between DOE and New Mexicans.

By February 5, 2014, when a fire in an underground truck shut down WIPP, the repository had received 11,894 truck shipments with 90,865 cubic meters of waste. Management did not efficiently use the underground space. By then, more than 20,000 cubic meters of permitted capacity was lost to salt creep, management inefficiency, and the storage of 5,200 empty containers.

Nine days later, on February 14, 2014, a radiation release contaminated more than 8,000 feet of underground tunnels, the exhaust shaft, and 22 workers on the surface.

WIPP re-opened in 2017 and is receiving a greatly reduced amount of waste because of the contamination. DOE and Congress have not begun the process of identifying another repository site. But DOE is planning to bring waste not allowed by the law and the social contract to WIPP indefinitely, including much of the 61.5 metric tons of surplus plutonium and, eventually, waste from future plutonium pit production.

In 2017, the Government Accountability Office reported



that the waste proposed for WIPP exceeds its legal capacity. In 2020, a panel of the National Academy of Sciences (NAS) report also found that WIPP did not have adequate legal or physical capacity. The NAS report stated that DOE's plans were "a substantial technical and 'social contract' change" that must be addressed with a Programmatic Environmental Impact Statement on surplus plutonium, additional significant "transparency," and "stakeholder engagement."

DOE has not begun a PEIS, nor has it engaged with officials or the public on the WIPP expansion plans.

In April 2020, in preparation for more than doubling the size of the underground disposal area, DOE began sinking a new shaft, despite public opposition from 97 percent of those commenting in the state of New Mexico's RCRA permitting process.

In October 2020, the New Mexico Environment Department stopped the construction, pending a public hearing process to determine whether the new shaft will be included in the WIPP Permit.

Congress has appropriated \$161.6 million of the estimated \$189.1 million cost for the new shaft. But the actual cost and schedule is now unknown. What is known is the increasing public opposition to the WIPP expansion plans. The public demands that the State of New Mexico enforce the legal agreements and social contract and insist that a scientifically sound, publicly accepted disposition plan be developed.

### RECOMMENDATIONS

- **Congress should appropriate no more funds for the proposed new WIPP shaft.**
- **DOE should comply with the law and agreements with New Mexico and begin discussions about WIPP's future and a new waste disposition plan.**



# Protect our Communities: Make Cleanup a Priority

**T**he legacy of 75 years of nuclear weapons production is spread across 16 sites in twelve states. The contamination at many of these sites presents an ever-increasing risk to the environment and surrounding communities, threatening rivers and aquifers.

The Department of Energy's Environmental Management (EM) program is responsible for cleaning up these sites. If it continues to address the problem with inadequate budget requests, the federal government's environmental liability will grow dramatically. In 1997, the Government Accountability Office reported DOE's estimate for the total cost of cleanup would be \$147 million. Fast forward to 2020, and GAO estimates that the total cost of cleaning up and monitoring these 16 sites until 2070 will be \$512 billion.

There are no fast, cheap shortcuts. The communities that have borne the brunt of this legacy of contamination now also bear the greatest risk.

Prudence and safety require Congress to invest in comprehensive cleanup at significantly increased funding levels now instead of funding stop-gap "cap and cover" schemes that dump cleanup tasks on future generations.

It's not that there is not enough money to protect our communities—in FY 2021, nuclear weapons spending was increased by 25% while the cleanup budget was slashed by as much as 40% at some large sites. The end result? Millions spent to babysit dangerous waste sites instead of cleaning them up and getting them off the books.

Despite clear evidence that deferring cleanup will cost hundreds of billions down the road, annual funding for cleanup continues at a rate of \$7-8 billion. Absent a significant increase in funding now, the ultimate cost will be borne by our grandchildren and great-grandchildren.

The cleanup we want is cleanup that removes and treats contamination—it's a win/win. Expensive long-term obligations are wiped off the books, and the public and environment are spared the ongoing threat of waste leaking off-site.

Ensuring effective management of

cleanup funding is a key to cleanup success. DOE has a well documented record of large-scale project failures. Hanford's Waste Treatment Plant is a case in point. Despite having spent more than \$25 billion on tank waste treatment, DOE has yet to immobilize one drop of Hanford's 56 million gallons of high-level tank waste in glass. Vitrifying Hanford's tank waste is possible—it requires effective oversight and increased funding tied to better management.

DOE's scheme to relabel tank waste and mix it with grout instead of glass must not be allowed to go forward. Previous attempts to dispose of waste by mixing it with grout, including at Hanford, have been disasters.

DOE's 2019 re-interpretation of the term High-Level Radioactive Waste eliminates important safeguards established by Congress through the Nuclear Waste Policy Act in a way that threatens human health and the environment. Congress should rescind the High-Level Radioactive Waste interpretive rule and associated changes.

Money alone will not create more cleanup. Improved management is required. About 90 percent of DOE EM funding goes to private contractors that operate the sites and carry out remediation activities. The 2020 False Claims Act case against Bechtel documented how a contractor used timecard fraud to line its pockets with taxpayer dollars instead of protecting the public interest. Contractor oversight is necessary to ensure effective cleanup and guard against fraud, cost overruns, poor performance and worker endangerment.

Finally, inadequate funding often results in DOE missing milestones in its cleanup agreements with states. This results in fines, agreement revisions, and increased risks from delayed cleanup. Recently, the New Mexico Environment Department (NMED) filed a complaint



against DOE to terminate a 2016 Consent Order at Los Alamos National Lab for failing to make progress on cleanup of contamination. NMED stated that DOE's cleanup plan for 2021 "was inadequate due to a lack of substantive and appropriate cleanup targets for coming years."

Congress should require DOE to request the funding necessary to meet its obligations. We deserve timely and protective cleanup.

### RECOMMENDATIONS

- Congress must invest in comprehensive cleanup that defines success by its isolation of chemical and radioactive hazards to protect future generations.
- DOE must rescind the 2019 high-level waste interpretation (relabeling).
- Congress must provide funding to effectively meet all legal agreements and require effective oversight of contractor performance.

# Protect our Communities: Meeting the Waste Challenge

**I**rradiated nuclear fuel (INF) and high-level waste (HLW) are among the most radioactive substances on Earth. Safe handling and eventual disposal of this deadly waste challenges both the nuclear power and weapons industries. Figuring out what to do with it is not a matter of choosing among options; once the waste is created, there are no good options left. Nearly 100,000 tons—billions of curies—of this waste has been created. Most of it is stored at 93 operating and three dozen closed atomic reactor sites across the U.S.

Though there is no plan for disposing of waste, nuclear power plants continue to generate more. Responsibility for storing INF lies with the nuclear utilities that have generated it. Federal law places responsibility for siting and operating permanent geologic repositories for INF on the Department of Energy (DOE).

For several years, private companies have been working to open waste storage sites in Texas and New Mexico. Each governor has expressed adamant opposition to both so-called Consolidated Interim Storage Facilities (CISFs). So too has a growing public groundswell, in-state and nationwide. The CISFs thus violate “consent-based siting,” as well as environmental justice principles. They are also not even needed. It is safer to leave waste where it is for now.

Transporting waste to CISFs only to later move it again to a permanent repository unnecessarily multiplies risks of accidents and exposures. And there is an

additional risk: CISFs could easily become *de facto* permanent surface storage. Utilities would like DOE to take title to the waste, even for “interim” storage, but this would violate the Nuclear Waste Policy Act of 1982, as Amended. This and other objections to CISFs are currently before multiple federal courts.

That leaves the question of where the waste will reside “permanently.” Decades ago, Congress decided DOE should site and operate permanent geologic repositories for highly radioactive wastes that threaten humans and the environment for tens of thousands of generations. The law required that the first repository should be operational by Jan. 31, 1998. It was to become home to up to 63,000 metric tons of commercial INF and 7,000 MT of DOE HLW and INF.

Taxpayers and ratepayers have spent approximately \$11 billion (15, when adjusted for inflation) to develop a repository in Nevada, but the site Congress chose, Yucca Mountain, is unsuitable for waste disposal and is strongly opposed by the Western Shoshone Nation and Nevadans. The Obama Administration made a wise decision to cease development of the Yucca site, and Congress stopped appropriating money for the project in FY2010.

The Trump administration tried to revive the Yucca proposal, only to end up opposing the scheme in its final year in office. Biden administration officials have indicated it is off the table. The ending of the Yucca story is already clearly written—it will never open.

There is no program to select alternative repository sites, which means there will be no repository for decades. DOE’s most recent estimate was that a repository cannot be opened till mid-century at the earliest. Waste will remain at nuclear plants. This underscores the urgent need for

Hardened On-Site Storage to enhance safety, security, health and environmental protection.

There is need for legislation to direct future attempts to site a permanent disposal facility. Lessons learned from Yucca’s failure must inform the next process. A successful nuclear waste program will be a public process that begins with the development of standards for a technically suitable repository site. It must also include other stringent criteria, including: legality, consent-based siting, environmental justice, regional equity, mitigation of transport risks, inter-generational equity, non-proliferation, and other criteria. It must not include proposals for dirty, dangerous, and expensive reprocessing.

Since DOE has proven itself incapable of carrying out a technically sound, publicly accepted program, the legislation should consider provisions for creation of a new nuclear waste agency to implement the new law.

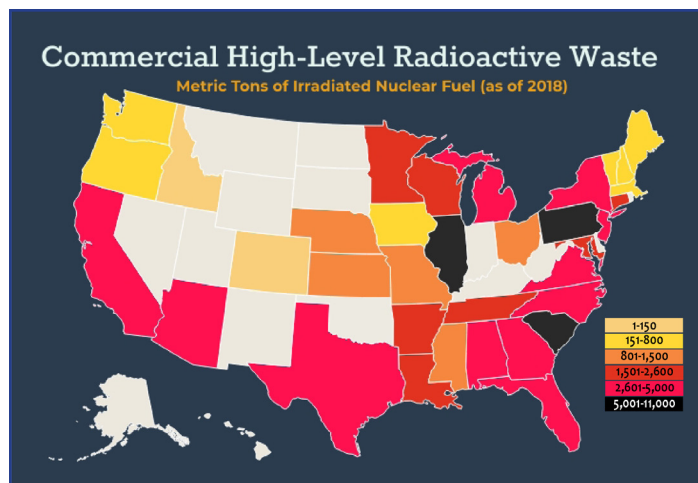
## RECOMMENDATIONS

### Congress should not:

- Fund, nor authorize, consolidated interim storage facilities for commercial irradiated nuclear fuel.
- Fund the proposed Yucca Mountain repository.
- Ignore risks of on-site storage in pools and dry casks.

### Congress should:

- Require hardened on-site storage of INF and HLW.
- Develop legislation to direct future attempts to site a permanent disposal facility.



source: Nuclear Information and Resource Service