Nos. 23-1300, 23-1312

In The

Supreme Court of the United States

NUCLEAR REGULATORY COMMISSION, *et al.*,
Petitioners,

v.

TEXAS, *et al.*,
Respondents.

INTERIM STORAGE PARTNERS, LLC,
Petitioner,

v.

TEXAS, *et al.*,
Respondents.

On Writs of Certiorari to the United States Court of Appeals for the Fifth Circuit

BRIEF FOR *AMICUS CURIAE* STATE OF IDAHO IN SUPPORT OF RESPONDENTS

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INTEREST OF *AMICUS CURIAE*

American nuclear energy began in Idaho.

After the Manhattan Project and the end of World War II, the federal government decided to build the world's first nuclear power plant. It needed a site isolated from large civilian populations, with plenty of water and easy access to electricity. Ultimately, it chose an area outside the small town of Arco, Idaho, and established the Idaho National Laboratory ("INL"), a cutting-edge, 890-square-mile research facility tasked with the development of nuclear electricity. On December 20, 1951, INL made history when, for the first time, atomic energy was safely used to produce electricity. It powered four lightbulbs.

Since then, 52 reactors have been built and operated at INL by the Department of Energy ("DOE"). INL's current capabilities include testing advanced nuclear energy concepts, turning nuclear waste into medical radioisotopes or fuel for various industries, furthering space exploration, and supporting the Navy's Nuclear Propulsion Program. These research projects have produced significant advances in the science of nuclear energy.

The projects have also left substantial nuclear waste sitting above an aquifer that 400,000 people drink from—waste the federal government has promised to remove from Idaho by 2035.

SUMMARY OF THE ARGUMENT

There is a single, clear, correct solution for storing America's nuclear waste: permanent geologic storage in a single secure location. Fortunately, this clear solution is the official policy of the United States, established decades ago by multiple acts of Congress. Unfortunately, the agencies responsible for nuclear waste refuse to comply with the policy.

Instead, the NRC is peddling the equivalent of duct tape on a broken window: "consent-based siting," which in practice means the ad hoc licensing of allegedly temporary storage facilities as existing storage fills up. For the United States as a whole, ad hoc siting will mean far more civilians at risk, with nuclear waste spread around the country instead of concentrated in one remote site. It will also dramatically complicate efforts to secure the waste and increase the threat of every nuclear danger, from barrels leaking in the water supply to theft by terrorists developing dirty bombs.

For Idaho specifically, the NRC's illegal ad hoc licensing will inevitably mean betrayal. For decades, Idaho has not only been a gracious host to the federal government's nuclear energy programs but also accepted additional waste from outside the state, all based on DOE's promise to remove all nuclear waste from the State by 2035. Ad hoc temporary licensing will not be enough for DOE to keep its promise to Idaho—if DOE persists in its "consent-based" approach, nuclear waste will remain in Idaho indefinitely, and without Idaho's consent.

The only way DOE can keep its promise to Idaho—and the only way DOE can comply with congressional

instructions going back decades—is to build a permanent repository. So, instead of handing the NRC another roll of tape by upholding its lawless temporary licenses, the Court should strike them down and push DOE back towards the permanent solution chosen by Congress.

ARGUMENT

I. Nuclear Waste Must Be Stored at Yucca Mountain—Not Idaho or Anywhere Else.

The federal government promised Idaho 30 years ago that the State would not become a permanent repository for nuclear waste. At the time, Idaho believed that promise because Congress had "imposed [a] responsibility upon the federal government" to construct the permanent repository for nuclear waste at Yucca Mountain with sufficient capacity to store the waste being held at INL, and the federal government to that point had shown every intent to carry out Congress's directions. *In re Aiken Cnty.*, 645 F.3d 428, 431–32 (D.C. Cir. 2011) (recapping relevant history).

But now that the federal government has scuttled its plans to construct a permanent repository at Yucca Mountain, there is not enough storage capacity for the growing volume of nuclear waste. The nuclear waste problem is too large for stop-gap solutions and is growing every day. *Texas v. NRC*, 78 F.4th 827, 833 (5th Cir. 2023). Unless DOE resumes efforts at Yucca Mountain, it will inevitably betray its word and leave nuclear waste in Idaho indefinitely after all.

To explain, Idaho began permitting DOE to store limited quantities of spent nuclear fuel used by the

Navy at INL in 1957.[1] The Navy used nuclear fuel to power its submarines and aircraft carriers, and the spent nuclear fuel was sent to INL for management and storage.[2]

However, the spent nuclear fuel—along with other waste products generated at INL—was not always managed in responsible ways. Often, the nuclear waste was shallowly buried in the soil, sometimes housed in nothing more than steel drums.

As a result of these troubling storage practices, leaks from the buried nuclear waste at INL were discovered at INL in 1987.[3] These leaks were extremely disturbing to Idaho—INL is located above the Eastern Snake Plain Aquifer, which is as large as Lake Erie and provides drinking water for 400,000 people and irrigation for one million acres of agriculture. Based on these leaks, INL was designated as a superfund site in 1989, and clean-up of the site has been ongoing since that time.[4]

But in 1991, DOE informed Idaho that it would be shipping *more* nuclear waste into the State for storage in addition to the Navy's spent nuclear fuel, this time from the new Fort St. Vrain reactor in Colorado.

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[1] Keith Ridler, *US Navy says it met Idaho deadline on spent nuclear fuel*, Navy Times (May 25, 2021), https://tinyurl.com/4m77zn9c.

[2] EPA, Nuclear Submarines and Aircraft Carriers, https://tinyurl.com/yc748hfa (last visited January 15, 2025).

[3] Keith Schneider, *Plutonium Leak in Idaho Symptom of Atomic Ills*, N.Y. Times (Apr. 17, 1988), https://tinyurl.com/4kchc5wr.

[4] EPA, Idaho National Engineering Laboratory (USDOE) Idaho Falls, ID, https://tinyurl.com/4a2kbx7n (last visited January 15, 2025).

Concerned about recent events and worried that Idaho would become a permanent storage site for spent nuclear fuel, Idaho's Governor Cecil Andrus sent letters to DOE and the company managing the Colorado reactor informing them that Idaho was "prepared to take all appropriate steps to prevent these shipments from entering the State." *Idaho v. U.S. Dep't of Energy*, 945 F.2d 295, 297 (9th Cir. 1991) (recapping relevant history).

When DOE declined to back down, Idaho brought litigation to prevent further shipment of nuclear waste from Fort St. Vrain or any other site, arguing that DOE failed to adequately assess the storage of nuclear waste at INL under NEPA and that storage of spent nuclear fuel at INL violated the NWPA, which required spent nuclear fuel be stored in Yucca Mountain. *E.g.*, *id.* at 297.

In 1995, after years of litigation, Idaho, DOE, and the Navy finally reached a binding settlement agreement.[5] The three guiding principles for the agreement were: (1) Idaho must not become a default repository for nuclear waste, (2) DOE must clean up and transport out the nuclear waste already in Idaho by 2035, and (3) INL would become a lead laboratory for research of spent nuclear fuel.[6] In exchange, Idaho agreed to allow DOE and the Navy to continue to ship small amounts of spent nuclear fuel into Idaho every year. Idaho has entered into subsequent agreements with DOE and the Navy regarding the treatment,

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[5] Idaho Dep't Env't Quality, 1995 Settlement Agreement, https://tinyurl.com/yc267vrt (last visited January 15, 2025).

[6] DOE, Explaining Idaho's Unique Settlement Agreement (Aug. 17, 2021), https://tinyurl.com/7zr3wtb5.

management, and disposal of nuclear waste at the INL.[7] In each subsequent agreement, Idaho has remained steadfast in requiring the federal government to keep its promise to remove nuclear waste from Idaho.

Without Yucca Mountain, it is inevitable that DOE will breach its agreement with Idaho. Even with temporary storage sites and consent-based siting, it is simply unclear where DOE could transport all of the nuclear waste that it currently has stored in Idaho.[8] Indeed, more than 88,000 metric tons of spent nuclear fuel from commercial reactors is currently stranded at reactor sites with no place to go.[9]

The good news is that breach can be avoided with a simple solution—DOE can build the permanent repository at Yucca Mountain like Congress told it to do. As long as DOE is allowed to continue licensing temporary storage facilities (unlawfully, *see infra*), it can evade its obligations to construct a permanent repository and put off (at least temporarily) the practical consequences. But this Court can steer DOE

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[7] Idaho Dep't Env't Quality, 1995 Settlement Agreement, https://tinyurl.com/yc267vrt (last visited January 15, 2025).

[8] *See* Max Johnson, *Defining Interim Storage of Nuclear Waste*, 117 Nw. Univ. L. Rev. 1177, 1182 (2023), https://tinyurl.com/ycxnfuuk (arguing that because there is "no plan for ultimate removal" of nuclear waste from temporary storage sites, the "'temporary' facilities will likely become de facto permanent storage facilities").

[9] Allison Macfarlane & Rodney C. Ewing, *Nuclear Waste Is Piling Up. Does the U.S. Have a Plan?*, Sci. Am. (Mar. 6, 2023), https://tinyurl.com/4ad3v34p; *see also Fla. Power & Light Co. v. Westinghouse Elec. Corp.*, 826 F.2d 239, 243–53 (4th Cir. 1987).

back on track towards implementing a lasting solution by refusing to uphold these stop-gap fixes.

II. Short-Term Storage Sites Are Neither Safe Nor Authorized.

Not only are temporary storage sites insufficient to address the ever-expanding nuclear waste problem, but they're also unsafe and not authorized by any statute.

Idaho is terribly conscious of the hazards associated with nuclear energy. In January 1961, a nuclear accident occurred at INL when a small test reactor exploded.[10] The explosion resulted in three deaths, which were the first—and still the only—fatalities in the history of United States nuclear reactor operations.

Those hazards don't disappear when nuclear fuel becomes spent. Spent nuclear fuel is still radioactive, explosive, and highly volatile. High-level spent nuclear fuel can still "produce fatal radiation doses" for millennia—the plutonium it contains has a half-life of 24,000 years.[11] As storage containers for nuclear waste break down and leak—as is inevitable with even the best technology,[12] and as Idaho

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[10] Idaho National Laboratory, *SL-1, Idaho Just the Facts*, https://tinyurl.com/2tj7t33n (last visited Jan. 21, 2025).

[11] NRC, Backgrounder on Radioactive Waste, https://tinyurl.com/3jhcc38k (last updated Jan. 26, 2024).

[12] Andrew Grant, *The Hardcore Nuclear-Waste Containers That Can Stand up to Airplane Crashes*, Discover Mag. (Nov. 11, 2019), https://tinyurl.com/yda9huz8 (even the best containers are built to last only 100 years); Wash. Dep't of Ecology, Handford leaking tanks, https://tinyurl.com/mte5vmr8 (last visited Jan. 17, 2025) (describing leak in Washington).

experienced first-hand in 1987—these radioactive isotopes may "get into groundwater or rivers," and "may enter food chains."[13]

Moreover, the explosive nature of spent nuclear fuel makes it a target for (1) theft, by those who wish to make dirty bombs, and (2) terrorist attacks. Beyond direct casualties, a terrorist bombing of a spent nuclear fuel storage site could start a "catastrophic" radioactive chemical fire endangering nearby civilian life.[14]

Temporary storage facilities only heighten these risks. Increasing the number of storage sites—and private ones at that—makes security more challenging, places nuclear waste near more civilians, and increases the chances that waste will be stored improperly.[15]

Storing nuclear waste at Yucca Mountain, by contrast, lowers the risks. Securing a single facility is far easier than many scattered facilities. This is why

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[13] NRC, Backgrounder on Radioactive Waste, https://tinyurl.com/3jhcc38k (last updated Jan. 26, 2024).

[14] Richard Stone, *Spent fuel fire on U.S. soil could dwarf impact of Fukushima*, Sci. (May 24, 2016), https://tinyurl.com/3cc2uywm; E.L. Sensintaffar & C.R. Phillips, *Environmental impact resulting from an explosion of a spent nuclear fuel storage facility*, Int'l Atomic Energy Agency (July 2005), https://tinyurl.com/3392h7rm.

[15] Already, more than one in three Americans lives within 50 miles of a nuclear waste storage site. Bethany Kacich, *Our Silent Zombie: Commercial Nuclear Waste Storage in the United States*, Advocates' Forum Univ. of Chi. (2022), https://tinyurl.com/58vt2kk9.

the United States stores more than half of its gold reserves at Fort Knox.[16]

Yucca Mountain also presents the safest scientific alternative for the containment of nuclear waste. "Experts agree that a geologic repository remains the *only* viable long-term solution for disposing of the majority of commercial nuclear waste."[17] That's because "[t]he structure of a geological repository allows burial of containers (like dry casks) of nuclear waste within a complex of underground tunnels, utilizing both manmade barriers (the casks themselves, backfill, shaft and tunnel seals, and others) and natural barriers (surrounding geologic deposits) to contain the nuclear waste for an extraordinarily long time."[18]

Given these comparative advantages, it's not hard to see why Congress explicitly authorized Yucca Mountain as a permanent storage facility. 42 U.S.C. § 10172. And given that explicit authorization and the extreme hazards presented by nuclear waste, it is equally clear that Congress did *not* authorize the temporary storage facilities at issue here through the oblique language on which the NRC relies. *See West Virginia v. EPA*, 597 U.S. 697, 723 (2022) (in "extraordinary case[s]" an agency must be able to

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[16] *See* U.S. Mint, Fort Know Bullion Depository, https://tinyurl.com/4zxth5au (last updated Oct. 25, 2024).

[17] The Editors, *Stop Wasting Time--Create a Long-Term Solution for Nuclear Waste*, Sci. Am. (Apr. 1, 2016), https://tinyurl.com/5n697nnb (emphasis added).

[18] Max Johnson, *Defining Interim Storage of Nuclear Waste*, 117 Nw. Univ. L. Rev. 1177, 1187 (2023), https://tinyurl.com/ycxnfuuk.

"point to 'clear congressional authorization' for the power it claims") (citations omitted). The only court of appeals to conclude otherwise conducted no analysis whatsoever. *See Bullcreek v. NRC,* 359 F.3d 536, 538 (D.C. Cir. 2004).

CONCLUSION

By licensing temporary storage facilities without any statutory authorization to do so, the NRC subjects countless Americans to risks they have never consented to and will inevitably force Idaho to be the nuclear waste dumping ground it was promised it wouldn't have to be. Rather than let this happen, this Court should affirm the Fifth Circuit's judgment.

Respectfully submitted,

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