

The Trump administration has secretly rewritten nuclear safety rules

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[Geoff Brumfiel](#)

The Trump administration has overhauled a set of nuclear safety directives and shared them with the companies it is charged with regulating, without making the new rules available to the public, according to documents obtained exclusively by NPR.

The sweeping changes were made to accelerate development of a new generation of nuclear reactor designs. They occurred over the fall and winter at the Department of Energy, which is currently overseeing a program to build at least three [new experimental commercial nuclear reactors](#) by July 4 of this year.

The changes are to departmental orders, which dictate requirements for almost every aspect of the reactors' operations — including safety systems, environmental protections, site security and accident investigations.

NPR obtained copies of over a dozen of the new orders, none of which is publicly available. The orders slash hundreds of pages of requirements for security at the reactors. They also loosen protections for groundwater and the environment and eliminate at least one key safety role. The new orders cut back on requirements for keeping records, and they raise the amount of radiation a worker can be exposed to before an official accident investigation is triggered.

Over 750 pages were cut from the earlier versions of the same orders, according to NPR's analysis, leaving only about one-third of the number of pages in the original documents.

Groundwater rules loosened

Protection of groundwater is no longer a "must." Rather, companies must give "consideration" to "avoiding or minimizing" radioactive contamination. Requirements for monitoring and documentation are also softened.

Added Removed Changed

CURRENT RULES **DOE O 458.1 Radiation Protection Of The Public And The Environment**

PROTECTION OF DRINKING WATER AND GROUND WATER

Ground water must be protected from radiological contamination to ensure compliance with dose limits in the Order and consistent with ALARA process requirements. To this end, DOE must ensure that:

(a) Baseline conditions of the ground water quantity and quality are documented;

(b) Possible sources of, and potential for, radiological contamination are identified and assessed;

(c) Strategies to control radiological contamination are documented and implemented;

(d) Monitoring methodologies are documented and implemented; and

(e) Ground water monitoring activities are integrated with other environmental monitoring activities.

NEW RULES **NE O 458.1A Radiation Protection Of The Public And The Environment**

PROTECTION OF DRINKING WATER AND GROUND WATER

Consideration must be given to avoiding or minimizing potential adverse impacts of groundwater from authorized nuclear facilities and radiological activities, to ensure compliance with public dose limits in this Order and consistent with ALARA process requirements. To this end, DOE must ensure that:

(i) baseline conditions of the ground water quantity and quality may be considered;

(ii) potential sources of, and potential for, radiological contamination may be identified and assessed;

(iii) strategies to control radiological groundwater contamination may be developed, as appropriate;

(iv) Ground water monitoring activities are implemented, as appropriate, and integrated with other environmental monitoring activities.

Source: U.S. Department of Energy

Credit: Compiled by Geoff Brumfiel and Arundhati Nair/NPR, graphic by Brent Jones/NPR

The new generation of nuclear reactor designs, known as small modular reactors, are being backed by billions in private equity, venture capital and public investments. Backers of the reactors, including tech giants Amazon, Google and Meta, [have said](#) they want the reactors to one day supply cheap, reliable power for artificial intelligence. (Amazon and Google are financial supporters of NPR.) Outside experts who helped review the rules for NPR criticized the decision to revise them without any public knowledge.

"I would argue that the Department of Energy relaxing its nuclear safety and security standards in secret is not the best way to engender the kind of public trust that's going to be needed for nuclear to succeed more broadly," said Christopher Hanson, who chaired the Nuclear Regulatory Commission from 2021 to 2025, when he was [fired by President Trump](#).

"They're taking a wrecking ball to the system of nuclear safety and security regulation oversight that has kept the U.S. from having another Three Mile Island accident," said Edwin Lyman, director of nuclear power safety at the Union of Concerned Scientists. "I am absolutely worried about the safety of these reactors."

In a lengthy statement to NPR, the Department of Energy defended the changes. "The reduction of unnecessary regulations will increase innovation in the industry without jeopardizing safety," it said.

It said that early copies of the new rules were shared with the companies as part of an "iterative effort" to develop a regulatory framework that would "expedite our review process while maintaining safety and security standards."

(The orders seen by NPR were not marked as drafts and had the word "Approved" clearly displayed on their cover pages.)

"The Department anticipates publicly posting the directives later this year," it said in its statement.

A new nuclear path

The origins of the changes can be traced to the Oval Office. In May of last year, Trump sat behind the Resolute Desk and [signed a series of executive orders on nuclear energy](#).

"It's a hot industry, it's a brilliant industry, you have to do it right," Trump said as smiling executives from the nuclear industry looked on. "It's become very safe and environmental, yes 100%," said Hanson, who signed the executive order.

Among the [executive orders](#) Trump signed that day was one that called for the creation of a new program at the Department of Energy to build experimental reactors. The document Trump signed explicitly stated that "The Secretary shall approve at least three reactors pursuant to this pilot program with the goal of achieving [nuclear] criticality in each of the three reactors by July 4, 2026."

Trigger for accident investigation raised

The new order raises the bar for an official accident investigation from incidents that expose workers to two times the legal dose, to those at four times.

Added Removed Changed

CURRENT RULES **DOE O 225.1B Accident Investigations**

LOSS OF CONTROL OF RADIOACTIVE MATERIAL

(1) Any single accident that results in:

(a) A general employee exceeding any of the external dose limits in 10 C.F.R. Part 835.202, Occupational Dose Limits for General Employees, by a factor of two or more.

NEW RULES **NE O 225.1 Accident Investigations**

LOSS OF CONTROL OF RADIOACTIVE MATERIAL

(1) Any single accident that results in:

a. A general employee exceeding any of the external dose limits in 10 C.F.R. Part 835.202, Occupational Dose Limits for General Employees, by a factor of four or more.

Source: U.S. Department of Energy

Credit: Compiled by Geoff Brumfiel and Arundhati Nair/NPR, graphic by Brent Jones/NPR

In other words, the Department of Energy had just over a year to review, approve and oversee the construction of multiple, untested nuclear reactors. That timeline has raised eyebrows.

"To say that it's aggressive is a pretty big understatement," said Kathryn Huff, a professor of plasma and nuclear engineering at the University of Illinois at Urbana-Champaign who served as head of the DOE's Office of Nuclear Energy from 2022 to 2024. Research reactors typically take at least two years to build from the point when construction begins, Huff said. Few — if any — have been built on the timescale laid out in the executive order.

Officials at the Energy Department knew the clock was ticking. In June, they met with the heads of several companies at the Nuclear Energy Institute, the nuclear industry's main lobby group in Washington, D.C. They briefed the gathering of CEOs, lawyers and nuclear engineers about the department's new "Reactor Pilot Program."

"One thing I do want to stress, this is not a funding opportunity," Michael Goff, the DOE's principal deputy assistant secretary for nuclear energy, said during the meeting, [which was recorded](#). Rather than offering money, the Reactor Pilot Program was promising something else that the companies had long wanted — a pathway to quickly get new test reactor designs through regulatory approval.

"Our job is to make sure that the government is no longer a barrier," said Seth Cohen, a lawyer at the Department of Energy responsible for implementing Trump's executive orders.

The DOE was uniquely positioned to offer a speedy pathway to approval. The nation's commercial nuclear reactors are typically under the regulatory oversight of the Nuclear Regulatory Commission. Hanson says the NRC is independent and known for its rigor and public process.

Sites across the country will host new reactor designs

The changes constitute "very clearly a loosening that I would have wanted to see," said Geoff Brumfiel, a nuclear engineer at the University of Illinois at Urbana-Champaign who served as head of the DOE's Office of Nuclear Energy from 2022 to 2024.

Lyman, who was part of the team that reviewed the changes, told NPR that the new rules "allow for a much more aggressive approach to safety," which could make the reactors less safe.

Reviewing the new rules, Lyman said he felt the general requirements are allowing companies "to write their own ticket as far as security goes." He's "not sure that the new rules are as stringent as the old rules," he said.

Public and environmental groups are worried that the changes will "increase the risk of an accident," said Hanson. "The new rules are not as stringent as the old rules," he said.

ALARA is not the only safety principle that has been stripped from the orders. Gone is the requirement that contractors have the potential to impact the environment.

The new rules also remove a requirement to use the "best available technology" to prevent water supplies from the discharge of radioactive material.

The revised orders leave out dozens of references to other documents and standards, including the department's [entire manual](#) for managing radioactive waste. Order 225.1B has been integrated into a new 25-page order on radioactive waste packaging and monitoring, which have been removed.

The new rules also make changes to the nuclear waste rules in a more streamlined way. The Energy Department said the changes "will reduce the overall financial burden of managing radioactive waste," said Hanson.

But perhaps nowhere are the cuts more obvious than in the new order on safeguards and security. Seven security directives totaling over 500 pages have been consolidated into a single, 23-page order.

Security rules slashed

The documents reviewed by NPR show just how extensive the streamlining effort has been.

The new orders strip away some guiding principles of nuclear safety, notably a concept known as "As Low As Reasonably Achievable" (ALARA), which requires nuclear reactor operators to keep levels of radiation exposure below the legal limit whenever they can. The ALARA standard has been in use for decades at the both the Department of Energy and the Nuclear Regulatory Commission at both the

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CURRENT RULES **DOE O 473.2A Protective Force**

PERSONAL PROTECTIVE ARMOR

Personal protective armor must be issued for all SPOs.

(1) Protective armor for SPOs must provide Type III protection, at a minimum, as established by the National Institute of Justice (NIJ) standard.

(2) Protective armor must be worn at all times by SPOs assigned to posts that interact with the general public.

(3) SPOs assigned to posts that interact with the general public must be documented in the SSP.

(4) SPOs assigned to posts that interact with the general public are required to wear Type III protective armor.

(5) SPOs assigned to posts that interact with the general public must be issued protective armor.

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