Roll Up, Roll Up, Get Your Plutonium Here!

By Linda Pentz Gunter, and edited for space

In yet another alarming development coming from the White House, private corporations proposing risky, untested startup reactors are to be given access to plutonium, the most toxic material known to science and the fore trigger in nuclear bombs.

A May 27 exposé in *The New York Times* revealed that the Trump administration is proposing to allow private entities access to Cold War-era leftover plutonium in order to convert it into fuel for risky new reactor designs that have yet to pass any kind of rigorous safety analysis.

The move marks a dangerous commercialization of plutonium and would treat plutonium like a commodity with value, instead of as a long-lived lethal waste. One of the first companies to benefit is Oklo, on whose board the current Energy Secretary, Chris Wright, used to sit and whose stock rose on the announcement.

The other companies involved, according to reporting in *The Times*, are Standard Nuclear, Exodys Energy, SHINE Technologies, and Flibe Energy. The plutonium would come from a surplus stockpile of dismantled nuclear warheads. Previous efforts to use plutonium as reactor fuel [in South Carolina] collapsed due to extreme expense and technical challenges.

Oklo, and its European partner, Newcleo — a nuclear "innovation" company registered in France — claim they can produce reactor fuel from surplus plutonium faster than waiting for new fuel production to get up and running in the United States. This, argues Ed Lyman, a senior scientist in the Global Security Program of the Union of Concerned Scientists, is simply nonsense.

"The idea that plutonium could actually be used more quickly than uranium fuel is absurd because of the complexity, and the attention to safety and security that a plutonium fuel facility would require," Lyman said, speaking during a recent Capitol Hill briefing on the risks and unaffordability of new nuclear projects.

Given its sole use as the key component of thermonuclear bombs, any use of plutonium, especially in the private sector, would require extreme security measures. Placing plutonium material in the hands of private multinational corporations not only sets a dangerous precedent but, "raises serious weapons proliferation concerns, makes little economic sense, and may adversely affect the nation's defense posture," wrote three Democratic members of Congress — Don Beyer of Virginia, John Garamendi of California, and Ed Markey of Massachusetts — in a letter last September to the Department of Energy.

"Taking plutonium, surplus plutonium, and handing it to industry for fuel," said longtime nuclear nonproliferation policy expert Sharon Squassoni, represents an ominous crossover from the civil into the military nuclear sector. "In terms of the military-versus-civilian line blurring, why is that so important? Because if it's not civilian, you don't [get] Nuclear Regulatory Commission (NRC) regulation," she said during remarks alongside Lyman and others during the Capitol Hill briefing. That is, the new startup reactors will be able to avoid all safety regulations imposed on today's reactors by the U.S. NRC.

The plan to build a factory to fabricate a fuel blend known as mixed-oxide, or MOX, at the Savannah River Site in Aiken, South Carolina — using uranium and surplus plutonium — eventually collapsed, partially due to the ever-ballooning price tag, which reached $50 billion before the project was abandoned.

Part of the extreme costs were due to the myriad technical challenges and the fact that … no existing U.S. reactors at the time were designed to do so.

Reprocessing itself is a highly expensive and polluting procedure, resulting in greater volumes of radioactive waste — much of it released into the environment — even as it reduces the levels of radioactivity within the waste. As a result of reprocessing at the Sellafield site in the UK, the Irish Sea is now considered the most radioactive sea in the world, due to the site's liquid radioactive discharges.

A MOX fuel fabrication facility was under construction at the Savannah River Site in South Carolina for years before being abandoned after wasting $50 billion.

"Trying to convert this material into reactor fuel is insanity. It would entail trying to repeat the disastrous MOX fuel program and hoping for a different result," Edwin Lyman, told Reuters last August.

More than 20 years ago, the now closed Nuclear Control Institute (NCI), for which Lyman used to work, called out the dangers of using plutonium in the commercial sector.

The NCI warned then of what would become the intolerably high costs of making MOX, writing: "The MOX approach would take decades to complete, require billions of taxpayers dollars in subsidies to electrical utility companies, and promote plutonium fuel industries in other countries."

"Converting warhead plutonium into fuel for generating electricity would stimulate commerce in this extremely toxic, weapons-usable material," the institute said, adding, "Fifteen pounds of plutonium is enough for one atomic bomb. A few specks of it inhaled into the lungs cause cancer. Commerce in many tons of plutonium raises risks of theft by terrorists and outlaw states, and of aggravating the consequences of reactor accidents."

— Linda Pentz Gunter is Executive Director of Beyond Nuclear, writes for Capitol Hill Citizen, edits Beyond Nuclear International, and is the author of* No To Nuclear: Why Nuclear Power Destroys Lives, Derails Climate Progress, and Provokes War *(Pluto Press 2026).

Japan's Waste Dispersal from Triple Meltdown: Not Just Tritium

By John LaForge

Radioactive cooling water, contaminated after being used to cool melted uranium and plutonium fuel inside three destroyed reactors is being dispersed to the Pacific Ocean by Tepco, the owner of the world's only triple meltdown disaster site: Fukushima-Daiichi in Japan. In addition, large amounts of groundwater and rainwater, that continuously pour into the wrecked reactors through earthquake-caused cracks in foundations, also become contaminated and require storage and treatment. After limited decontamination, the wastewater is allowed to add to oceanic pollution even in the face of international criticism, protest, and several national bans on the importation of Japanese seafood from the region.

The Citizens Nuclear Information Center in Tokyo (CNIC) reported last summer, in its "Nuke Info Tokyo" #232, that many radioactive materials contaminate the wastewater being sent into the Pacific.

While Fukushima's owner Tepco, Japan's government, and the corporate media regularly claim that tritium is the only radioactive Fukushima waste that is in the wastewater being dispersed, the chart (at right) records other highly radioactive materials in the wastewater, and total amounts through the end of 2025.

The total amount of nuclides released other than tritium were calculated from their residual concentrations in the treated water and the total amount of the treated water released. By December 2025, a total of 133,321 cubic meters (639 barrels) of wastewater had been dumped, containing an estimated total of about 31.2 trillion becquerels of tritium.

What does "MBq" mean? "MBq" stands for mega-becquerel or one-million becquerels. A measure of ionizing radiation, one becquerel is one atomic disintegration per second.

Tepco has estimated that it has dumped 2,633 million (2.6 trillion) becquerels of radioactive carbon-14 into the Pacific Ocean, along with all the tritium and other radioactive elements.

	Nuclide	Total amount released (MBq)
Carbon-14	C-14	2633
Cobalt-60	Co-60	45
Strontium-90	Sr-90	99
Yttrium-90	Y-90	99
Technetium-99	Tc-99	87
Antimony/Sb-125	Sb-125	19
Technetium-125m	Te-125m	7
Iodine-129	I-129	115
Cesium-137	Cs-137	36

Some of the radioactive contaminants in Fukushima wastewater being dumped into the Pacific Ocean.

Carbon-14 has a radioactive half-life of 5,730 years. After one half-life (5,730 years), 50% of the carbon-14 remains. Scientists say it takes ten half-lives for radioactive material to decay. So, all the carbon-14 being poured into the Pacific from Fukushima will remain there, contaminating sea life and the food web, for about 57,000 years.

Japan's Radioactive Waste Discharge Makes Others Bear the Cost

By Chen Xiang

Japan has now completed 20 rounds of discharge, releasing roughly 157,000 tonnes of nuclear-contaminated water in total.

A simulation study by a research team at Tsinghua University [in Beijing] previously showed that after entering the ocean, contaminated water could spread across most of the North Pacific and reach the coast of North America in about 1,200 days, or roughly 3.3 years.

By the start of this latest discharge, nearly three years have passed since Japan began releasing the water, and trace amounts of radionuclides such as tritium and carbon-14 have been detected in many areas of the North Pacific.

The discharge poses long-term, latent, and cumulative risks, with potential ecological and health impacts that warrant close attention. It is not an acute health hazard with immediate effects; its negative impacts may continue to accumulate and spread imperceptibly over an extended period.

The Comprehensive Report on the Safety Review of the ALPS-Treated Water ... released by the International Atomic Energy Agency on July 4, 2023, noted that the ALPS "does not remove all radioactive material. Small amounts of different radionuclides remain in the water (although they are well below regulatory limits) even after treatment, and tritium is not removed by the ALPS system at all."

These residual radioactive substances could potentially accumulate through marine food chains, or food web, and eventually enter the human food supply, posing continuing risks to the health of people living along the North Pacific coast, or who consume seafood products from there, over the coming decades.

It is therefore clear that short-term monitoring results meeting safety standards do not guarantee absolute safety, nor can they justify Japan's reckless discharge of nuclear-contaminated water.... People in Pacific coastal countries should not be forced to bear the health and ecological consequences of Japan's nuclear accident.

Japan's unilateral decision to discharge nuclear-contaminated water into the ocean constitutes a serious violation of international law.... Japan has seriously violated its obligations under the United Nations Convention on the Law of the Sea to protect and preserve the marine environment.

International rules lack binding corrective mechanisms and are unable to effectively halt Japan's discharge of nuclear-contaminated water. As a result, Japan has been able to shift the costs of managing its nuclear accident and its ecological consequences onto the rest of the world.

***— The author, an Associate Research Fellow at the Institute of Japanese Studies, Chinese Academy of Social Sciences, wrote this for* People's Daily.**