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Monitored this issue:

Guinea pig nation, US Nuclear Regulatory Commission seeks greatly reduced safety regulations for “advanced” nuclear power plants

“Guinea Pig Nation: How the NRC’s new licensing rules could turn communities into test beds for risky, experimental nuclear plants,” is what physicist Dr. Edwin Lyman, Director of Nuclear Power Safety with the Union of Concerned Scientists, titled his presentation in November 2022.

The talk was about how the U.S. Nuclear Regulatory Commission is involved in a major change of its “rules” and “guidance” to reduce government regulations for what the nuclear industry calls “advanced” nuclear power plants.

Already, Lyman said, at a “Night with the Experts” online session organized by the Nuclear Energy Information Service, the NRC has moved to allow nuclear power plants to be built in thickly populated areas. This “change in policy” was approved in a vote by NRC commissioners in July.

Population density

For more than a half-century, the NRC and its predecessor agency, the U.S. Atomic Energy Commission, sought to have nuclear power plants sited in areas of “low population density”—because of the threat of a major nuclear plant accident.

But, said Lyman, who specializes in nuclear power safety, nuclear proliferation and nuclear terrorism, the NRC in a decision titled “Population-Related Siting Considerations for Advanced Reactors,” substantially altered this policy.

The lone NRC vote against the change came from Commissioner Jeffery Baran who in casting his ‘no’ vote wrote “Multiple, independent layers of protection against potential radiological exposure are necessary because we do not have perfect knowledge of new reactor technologies and their unique potential accident scenarios….Unlike light-water reactors, new advanced reactor designs do not have decades of operating experience; in many cases, the new designs have never been built or operated before.”

He noted a NRC “criteria” document which declared that the agency “has a longstanding policy of siting nuclear reactors away from densely populated centers and preferring areas of low population density.” But, said Baran, under the new policy, a “reactor could be sited within a town of 25,000 people and right next to a large city. For reactor designs that have not been deployed before and do not have operating experience, that approach may be insufficiently protective of public health and safety…And it would not maintain the key defense-in-depth principle of having prudent siting limitations regardless of the features of a particular reactor design—a principle that has been a bedrock of nuclear safety.” That is just one of the many reductions proposed in safety standards.

Faith

“The central issue,” commented Lyman in an interview following his November 17th presentation, “is that the NRC is accepting on faith that these new reactors are going to be safer and wants to adjust its regulations accordingly, to make them less stringent—on faith.”

The key motivation, he said, behind the nuclear industry’s push to significantly weaken safety standards is that the line of smaller nuclear power plants the nuclear industry is now pushing—including what it calls the “small modular nuclear reactor”—is that they are going to be “much more expensive” than the existing light-water nuclear power plants, the most common type of nuclear power plant which are large and are cooled by plain water. Thus, he said, these “advanced” nuclear plants would be more costly to operate than using energy alternatives, “certainly wind and solar.”

Safety Reductions

And the NRC is complying with the nuclear industry. It’s a demonstration of one of the alternatives for the acronym for the NRC—Nuclear Rubberstamp Commission.

The list of proposed safety reductions in the PowerPoint portion of Lyman’s presentation under “Cutting corners on safety and security to cut costs,” and what the nuclear industry “wants” in what the NRC calls its “Part 53” assemblage of changes, included, in addition to the already completed alteration of siting criteria:

- Allowing nuclear power plants to have a “small containment—or no physical containment at all.” Containments are the domes over nuclear plants to try to contain radioactive releases in an accident.
- “No offsite emergency planning requirements.” The NRC has been requiring emergency planning including the designation of a 10-mile evacuation zone around a nuclear power plant.
- “Fewer or even zero operators.” The nuclear industry would like advanced nuclear plants to operate “autonomously.”
- Letting the plants have “fewer” NRC “inspections and weaker enforcement.”
- “Reduced equipment reliability reporting.”
- “Applications” for an advanced reactor “should contain minimal information.”
- “The NRC’s review standards should be lenient.”
- Letting the plants have “fewer inspections and weaker enforcement.”
- “Fewer back-up safety systems.”

- "Regulatory requirements should be few in number and vague."
- "Zero" armed security personnel to try to protect an advanced nuclear power plant from terrorists.

Lyman commented: "I could go on and on." The Nuclear Energy Information Service's summary of his presentation stated: "Under the direction of Congress, the NRC is developing new regulations to facilitate licensing of experimental reactors by relaxing safety security standards and by relying on safety demonstrations that utilize computer simulations rather than experimental data. The major focus of this effort, known as 'Part 53,' is being written with an unprecedented level of industry involvement. If 'Part 53' is enacted, first-of-a kind reactors would be located in densely populated urban areas without any promise for emergency evacuation, planning, without security forces to protect against terrorist attack, and without highly trained operators—and all without meaningful opportunities for public input."

Non-Light-Water Reactors

In his talk, Lyman referenced a 140-page report of the Union of Concerned Scientists which he authored, issued last year, titled "Advanced" Isn't Always Better, Assessing the Safety, Security, and Environmental Impacts of Non-Light-Water Nuclear Reactors.

The report states: "Almost all nuclear power reactors operating and under construction today are LWRs, so called because they use ordinary water to cool their hot, highly radioactive cores. Some observers believe that the LWR, the industry workhorse, has inherent flaws that are inhibiting nuclear power's growth….In response, the US Department of Energy's national laboratories, universities, and numerous private vendors—from large established companies to small startups—are pursuing the development of reactors that differ fundamentally from LWRs. These non-light-water reactors are cooled not by water, but by other substances, such as liquid sodium, helium gas, or even molten salts." These "are sometimes referred to as 'advanced reactors.' However, that is a misnomer for most designs being pursued today…largely descend from those proposed many decades ago," the report continued.

"In part," it went on, "the nuclear industry's push to commercialize NLWRs is driven by its desire to show the public and policymakers that there is a high-tech alternative to the static, LWR-dominated status quo: a new generation of 'advanced' reactors. But a fundamental question remains: Is different actually better? The short answer is no. Nearly all of the NLWRs currently on the drawing board fail to provide significant enough improvements over LWRs to justify their considerable risks."

"Not Really Concerned"

In the report, Lyman extensively examines issues involving each of the NLWR (Non Light Water Reactors) or "advanced" reactors. David Kraft, director of the Chicago-based Nuclear Energy Information Service, after Lyman's talk said in an interview: "Dr. Lyman warns us all once again how largely beholden to the nuclear industry the NRC is. NRC is willing to twist and contort even reasonable safety regulations in ways that cater to nuclear industry desires to a degree that would rival a toy balloon-dog at a children's party. It is this kind of almost institutionalized acquiescence to industry wants that has led many to believe that NRC stands for Not Really Concerned."

Kraft continued: "Make no mistake about it—while NRC is doing its part to serve nuclear industry needs, we should not lose sight of the fact that it is the aggressive pro-nuclear agenda of the Biden Administration that has unleashed a juggernaut of financial and PR support for new nuclear reactors. Everything from the tens of billions of dollars allocated for new nuclear in the Infrastructure Act and the IRA [Inflation Reduction Act, which establishes a nuclear power production tax credit], to the national dog-and-pony show [the recent U.S. tour promoting nuclear power] of Energy Secretary Jennifer Granholm, demonstrates the administration's intentions to run roughshod over the objections of the public. We have a hard fight ahead of us."

About The Nuclear Energy Information Service: it is among the safe-energy, anti-nuclear organizations that are challenging the NRC's effort to change its "rules" and "guidance" to boost "advanced" nuclear plants. Founded in 1981, its website is **www.neis.org** . It plans to post through its website a recording of Lyman's Zoom presentation. Lyman's PowerPoint included a slide saying the "NRC is not currently" accepting comments on its plan for changes in its regulations for "advanced" reactors. But, it said, "the public is always free to weigh in" on NRC actions and recommended people attend any public meetings held on the issue.

About Dr. Lyman: He joined the Union of Concerned Scientists in 2003 and is based in its Washington, D.C. office. Previously, he was president of the Nuclear Control Institute in Washington. Before that he was a postdoctoral research associate at Princeton University's Center for Energy and Environmental Studies, now the Science and Global Security Program. He earned a doctorate in physics from Cornell University in 1992. He is a co-author of the book Fukushima: The Story of a Nuclear Disaster.

About the author: Karl Grossman is an investigative reporter and a Professor of Journalism at the State University of New York/College at Old Westbury.

Dutch Advertising Authority slams claims made by Borssele Nuclear Power Plant about 'recycling' of nuclear waste as misleading

Operator EPZ says it doesn't know where 60% of its spent fuel goes December 2022

EPZ, the operator of the Dutch Borssele nuclear power plant, has long claimed that it recycles "95 percent" of its nuclear fuel, and that only "5 percent" remains as nuclear waste. Following a complaint by Laka, the Board of Appeals of the Dutch Advertising Authority, ruled yesterday that these are misleading environmental advertisement claims. In its ruling, the Board blames EPZ all the more because these misleading claims appear on EPZ's website under the header "Environment & Health", where 'unsuspecting visitors should expect accurate and balanced information about nuclear fuel and nuclear waste'.

The Environmental Advertising Code The Advertising Authority has previously determined that EPZ's website should be considered as advertising. Advertising claims about recycling and waste are 'environmental claims' for which the more strict Environmental Advertising Code (Milieu Reclame Code, or MRC in Dutch) applies. One of the rules of the MRC is that the more precise (95%, 5%) the environmental claim, the stricter the burden of proof.

What is the case? EPZ transports spent nuclear fuel to the French firm Orano, where it is being reprocessed. In May this year, the French advertising code commission JDP only issued a ruling in response to a complaint by the French Réseau Sortir du nucléaire showing that Orano practically does not enrich reprocessed uranium for nuclear fuel production, and that the reprocessing actually happens in Russia. This is then also the case for the Borssele reprocessed waste. However, EPZ's website on "recycling" does not mention Russia, only France. But if not from France, where, according to EPZ, does their 'recycled' nuclear fuel come from? At the same time, last year EPZ had asked the government for permission to exchange 1764 barrels of highly radioactive (German?) nuclear waste with reprocessor Orano. Could EPZ then really maintain that only "5% of its fuel remains as nuclear waste"? All in all, enough fuel for a case at the "Reclame Code Commissie", the Dutch Advertising Code Committee.

Because EPZ cites exact figures in its environmental claim about reuse, it also had to substantiate them at the Advertising Code Committee. And then at this meeting they came up with figures actually that couldn't be right.

What happened: EPZ showed a contract stating that they would make 123 tons of uranium reprocessed in France available to their fuel supplier Framatome for the production of new reprocessed nuclear fuel. Laka had calculated that this new fuel weighs only 48 tons, leaving 75 tons, almost 60% of all nuclear waste, unaccounted for. According to Laka, this 60% is the depleted reprocessed uranium dumped by Rosatom on the tundra in Russia. Where, according to EPZ, had that batch gone? "Sold," EPZ said at the hearing in late October. The Board of Appeal of the Advertising Code Committee then gave EPZ two weeks to substantiate that those "sold" 75 tons of reprocessed uranium were in fact being used in a nuclear power plant for electricity production. If EPZ could not prove this, the environmental claim that "95% is reused" could not be used. After the deadline passed, EPZ replied the Board that the production of fuel elements with reprocessed uranium leaves 'tails', and that they do not have evidence regarding the further use of those tails.

The Board of Appeals had already alerted EPZ to the consequence of not substantiating its environmental claims, and in its final ruling left little doubt about EPZ's misleading claims:

Based on the foregoing, the Board concludes that the accuracy of the environmental claim regarding 95% reuse and 5% waste has not been demonstrated in accordance with Article 3 Environmental Advertising Code (MRC). Since the seemingly accurate claims regarding the percentages have not been proven, the Board rules that these statements give consumers an incorrect and therefore misleading (within the meaning of article 2 MRC) idea about the extent to which EPZ's nuclear fuel is reused and about the waste, respectively. This is all the more damning since nuclear waste is a major health risk and the claims were specifically made in the context of the theme "Environment & Health", which presupposes correct and balanced information to consumers about these aspects of nuclear energy. The Board finds the claims in violation of Article 2 MRC on this point.

EPZ is recommended to stop using the following environmental claims:

1. "95 percent of the nuclear fuel is being used again";
2. "5 percent remains as waste";
3. "The reusable uranium and plutonium goes to a nuclear fuel plant where it is being processed into new nuclear fuel. This returns to our nuclear power plant for a second cycle of four years of energy production.";
4. "The five percent waste is reprocessed and packaged after which it goes back to the Netherlands for storage."

Source: LAKA

NUCLEAR NEWS

World Nuclear Power Status

Number of Reactors
(as of December 2022)

Source: https://www.worldnuclearreport.org/

ANTI-NUCLEAR NEWS

US: Speak Out! Tell Congress: No Funds or Authorization for Illegal Nuclear Waste Dumps

The Nuclear Waste Policy Act (NWPA) is the law establishing the federal government's responsibility for managing high-level nuclear waste from commercial nuclear power and the nuclear weapons program. It prohibits the federal government from taking title to commercial high-level nuclear waste (irradiated or "spent" fuel) and transporting it to an interim storage site, unless and until a permanent geological repository is open and operating.

A provision (Section 310) of the Energy and Water Development bill from that came out the Senate Subcommittee on Energy is making an end-run around the NWPA. The pending provision in the FY 2023 Energy and Water appropriations bill would authorize and direct opening of consolidated "interim" storage sites (CISF) pilot projects with no limit on the amount of waste "notwithstanding any provisions of the Nuclear Waste Policy Act."

Congress knew what it was doing when it specifically excluded sending nuclear waste to temporary surface "parking lot" or shallowly buried "interim" storage facilities that can easily become de facto permanent storage in the absence of a permanent site. Section 310 is a backdoor, quiet attempt to reverse existing law and undermine Congressional intent. It has been stopped many times in past years….it must be removed this time again!

Opening CISFs would initiate many thousands of unsafe shipments of intensely radioactive nuclear power waste across most of the continental states and 75% or more of Congressional districts. Nuclear waste canisters and transport casks are subject to radiation leakage and other failures, which would pose threats to thousands of communities along the transportation routes. The large portion of high burnup irradiated ("spent") fuel in the nation's inventory compounds these safety problems. The Nuclear Waste Technical Review Board recommends spending a minimum of a decade to develop better cask and canister designs before attempting to transport irradiated fuel. Yet CISF developers insist they will be open and start accepting shipments starting in 2023.

Loaded canisters plus transport casks weigh up to 180 metric tons, not counting the weight of the vehicles. US roads, rails, bridges, and other infrastructure can't safely take that weight. Assuming they get upgraded through new infrastructure spending, which could take decades, that won't make irradiated fuel transportation safe from collisions, terrorist attacks, fires, submersion, and leaking or failing canisters, which could lead to severe radiological releases.

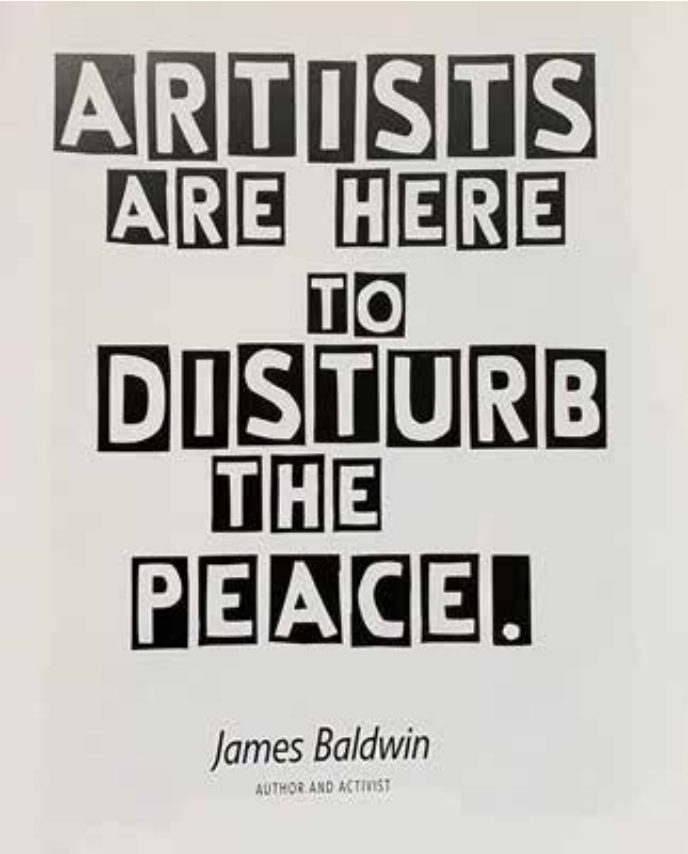
Despite all this, Section 310 of the Senate FY 2023 appropriations bill for energy and water development authorizes the Secretary of Energy "to conduct a pilot program to license, construct, and operate one or more Federal consolidated storage facilities to provide interim storage as needed for spent nuclear fuel and high-level radioactive waste." This is to be done "notwithstanding any provision of the Nuclear Waste Policy Act." It amounts to an end-run around the law, which Congress established for good reason, to protect the public and the environment.

It's imperative not to preempt the NWPA with an obscure provision buried in the appropriations package. Shipping irradiated "spent" fuel and storing it at supposedly interim sites is dangerous and violates consent-based siting and environmental justice principles as well as federal law.

Sign the petition: https://nirs.salsalabs.org/Section310Alert2November2022/index.html?eType=EmailBlastContent&eId=a4112fa1-b9c4-4466-b69d-e1003235e02f

Laka's online poster collection

Browse through thousands of posters from the worldwide movement against nuclear power



This is a website with over 4,900 posters from the worldwide movement against nuclear power.

Since the development of nuclear power, as a spin-off of the nuclear weapons program in the second World War, doubts about safety, radioactive waste and the consequences of radiation were raised. From the beginning of the 1970s popular movements organized protest. One of the many ways to raise awareness was by producing posters. Nearly all political movements, certainly in the past, when internet was not around yet, used posters to tell their message and call for action.

Nuclear energy was sold to the public in the fifties with the promise of abundance and being too cheap to meter and that it would change the world for the better. Minor existing problems would be solved soon (or just disappear due to technological progress) and the promises were endless: nuclear propulsion of ships, planes, trains would make traveling cheap and available for all. Despite 60 years of nukespeak (any euphemisms used when discussing nuclear technology or nuclear war), hundreds of billions euros (or dollars) spent, those promises have not been met.

People oppose nuclear power for good reasons and point the way to alternative, sound and durable solutions for producing energy for decades. From the early 1970s on, anti-nuclear individuals and organizations focused on wind, sun, geothermal power, tidal and numerous other ways to produce energy environmental friendly (abundant maybe, but certainly not too cheap to meter) and sustainable energy scenarios were developed.

Everybody looks at posters, but few really take notice. When trying to find posters from the anti-nuclear power movement for this project, it became clear that many groups did not collect posters, sometimes not even the ones they produced themselves. That may not be surprising for a movement that functioned almost always without fixed organizational structures, large offices and strong hierarchy. But because of that, much of the rich cultural heritage of the movement is lost, especially on a local level; and the anti-nuclear movement was and still is mainly organised on a local level.

Most of us are not interested in posters from an historical or aesthetic perspective. But it is important to recognize the importance of the poster as an educational, organizing, and consciousness-raising tool. And to understand the power of art and the politics of culture.

Printing posters a thing of the past?
Nowadays, in the internet era, the heydays of printed posters seems to be more and more a thing of the past. The 'habit' of young people in the climate movement to individually make a (written statement on a) board certainly contributes to this. Although a beautiful reflection of the individual thoughts and demands, also a pity, because posters provide a strong message and a uniform appearance of that message. And posters can be very helpful reaching out at people who are not per se participating in a movement, because it becomes part of the public space.

Source **https://www.laka.org/docu/affiches/**