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October 21, 2020

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ATTN: Rulemakings and Adjudications Staff

submitted electronically via Rulemaking.gov

**RE: Public Employees for Environmental Responsibility's Comments
on Docket ID NRC-2020-0065**

Dear Sir/Madam:

Public Employees for Environmental Responsibility (PEER) submits these comments in opposition to NRC's proposal to deregulate the disposal of virtually all radioactive waste from nuclear reactors, aside from irradiated fuel, as well as the deregulation of much other atomic waste. The proposal would endanger public health and the environment.

STATEMENT OF INTEREST

PEER is a service organization for environmental and public health professions, land managers, scientists, enforcement officers and other civil servants dedicated to upholding environmental laws and values. We work with current and former federal, state, local and tribal employees. PEER protects public employees who protect our environment. PEER supports past and present public employees who seek a higher standard of environmental ethics and scientific integrity within their agencies. PEER does this by defending whistleblowers, shining the light on improper or illegal government actions, working to improve laws and regulations, and supporting the work of other organizations.

SUMMARY OF ISSUE: NRC Proposes, in the Guise of An "Interpretive Rule," to Rescind Long-Standing Regulations Requiring a License to Dispose of Radioactive Waste

NRC's long-standing regulations require anyone who wishes to receive and dispose of licensed radioactive waste to have a license to do so and meet detailed requirements to protect public health and the environment.¹ The proposed "interpretive rulemaking" would revoke those requirements and allow the owner of essentially any site such as regular landfill to request an exemption that would allow it to receive and dispose of radioactive waste without a nuclear license and thus without meeting any of the typical health, safety, and environmental requirements.² This means, for example, that any regular, municipal garbage dump could be allowed to take radioactive waste, without being licensed to do so and without meeting the safety rules required of licensed radioactive waste sites.

Thus, if you have a nuclear power plant in your community, virtually all of its radioactive waste other than spent fuel could be dumped at your local landfill. The NRC says it would allow this so long as it is estimated by the landfill operator to expose people to no more than 25 millirem of radiation per year,³ which is the equivalent of receiving, without consent, 900 unwanted and unnecessary chest x-rays over a lifetime.⁴ That exposure would result in one in every 500 people exposed getting a cancer from the exposure, using the official risk coefficients from EPA and the National Academy of Sciences for cancer per unit dose of radiation.⁵ The cancer risk from that radiation dose is 2,000 times the goal for a Superfund site under CERCLA and 20 times the

¹ 10 CFR Part 61, "Licensing Requirement for Land Disposal of Radioactive Waste"; U.S. Nuclear Regulatory Commission, "Consolidated Guidance: 10 CFR Part 20 – Standards for Protection Against Radiation," 3.20.2001 General Requirements. <https://www.nrc.gov/docs/ML0133/ML013330106.pdf> 10 CFR §61.3 ("License Required"): "(a) No person may receive, possess, and dispose of radioactive waste containing source, special nuclear, or byproduct material at a land disposal facility unless authorized by a license issued by the Commission pursuant to this part, or unless exemption has been granted by the Commission under §61.6 of this part."

² U.S. Nuclear Regulatory Commission, "Transfer of Very Low-Level Waste to Exempt Persons for Disposal," 85 Fed. Reg. 13,076, March 6, 2020, NRC-2020-0065. <https://www.regulations.gov/document?D=NRC-2020-0065-0001>

³ *Ibid*, Section V. Specific Exemptions for Disposal.

⁴ U.S. Environmental Protection Agency, "How much radiation am I exposed to when I get a medical x-ray procedure?" <https://www.epa.gov/radiation/how-much-radiation-am-i-exposed-when-i-get-medical-x-ray-procedure>. EPA states that a single chest x-ray is equal to 2 millirem. An exposure of 25 millirem per year would be equivalent to approximately a chest x-ray every month from conception to death. Over a lifetime of 70-75 years, that would be ~900 chest x-rays.

⁵ $0.025 \text{ rem/year} \times 70 \text{ years} \times 1.16 \times 10^{-3} \text{ cancers/rem} = 2 \times 10^{-3} \text{ cancer risk}$. The $1.16 \times 10^{-3} \text{ cancers/rem}$ coefficient is from USEPA, *EPA Radiogenic Cancer Risk Models and Projections for the U.S. Population*, EPA 402-R-11-001, April 2011 (<https://www.epa.gov/sites/production/files/2015-05/documents/bbfinalversion.pdf>), which in turn is derived from the National Academy of Sciences/National Research Council, *Health Effects from Exposure to Low Levels of Ionizing Radiation, BEIR VII Phase 2*, 2006, <https://www.nap.edu/catalog/11340/health-risks-from-exposure-to-low-levels-of-ionizing-radiation>

upper limit of EPA's acceptable risk range.⁶ EPA has long found that such a dose limit would be "non-protective" of public health.⁷

Furthermore, the 25 millirem per year level that NRC says it will use for exempting dumpsites from licensing requirements is not a measured value but simply a calculated estimate put forward by the owner of the landfill when it is requesting exemption from licensing requirements, before ever receiving any waste. An applicant for an exemption can readily manipulate inputs for the modelling to produce estimates that purportedly show 25 millirem per year doses when the actual doses could be far higher.⁸ Furthermore, such models and NRC's reviews of the applicant's models are generally declared "proprietary" and shielded from public review and scrutiny.⁹

Agreement States might be allowed under this proposal to authorize unlicensed landfills to take radioactive waste amounts that produce even higher doses than 25 millirem per year.¹⁰

⁶ EPA states that 10^{-6} (one in a million) cancer risk is the point of departure for CERCLA cleanup goals and the basis for Preliminary Remediation Goals and that 10^{-4} (one in ten thousand) is the upper limit of the acceptable risk range. National Contingency Plan (NCP), 40 CFR 300.430(e)(A)(2). See also USEPA, *Radiation Risks at CERCLA Sites: Q&A*, OSWER 9285.6-20, June 13, 2014, p. 27. <https://semspub.epa.gov/work/HQ/176329.pdf>

⁷ U.S. Environmental Protection Agency, "Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination," August 22, 1997, p. 3. <https://semspub.epa.gov/work/HQ/176331.pdf>. EPA has warned NRC that EPA might have to list sites producing more than 15 millirem per year as Superfund sites because the risk exceeds EPA's acceptable risk range. Letter from EPA Administrator Carol Browner to NRC Chairman Shirley Ann Jackson, February 7, 1997. EPA has since declared even 15 millirem per year to be non-protective. EPA, *Radiation Risks at CERCLA Sites: Q&A*, 2014, p. 28. Note that the EPA risk estimate in that document does not yet employ the newer EPA radiation risk figures cited above and assumes a far shorter exposure period than allowed by the NRC proposal.

⁸ NRC states in section V. of the proposed rule that applicants seeking exemptions should submit a safety analysis that includes, "a discussion regarding the conceptual and mathematical models and parameters used in the applicant's dose assessment related to proposed disposal (e.g., site specific parameters and modeling data and results); and (v) site-specific dose assessments or sensitivity and uncertainty analyses when performing the dose assessments to estimate the radiological impacts to members of the public and ensure that the 25 millirem per year cumulative dose limit is not exceeded." The applicant is therefore responsible for choosing the model and controlling the model inputs, and the radiological health impacts are merely estimates made by the applicant in order to get the exemption.

⁹ Such models and NRC's reviews of the applicant's models are generally shielded from public review and scrutiny. See e.g., WESTINGHOUSE ELECTRIC COMPANY LLC, "Copy of Letter from L. Camper to J. Weismann approving use of USEI SSDA for 10 CFR 20.2002 Alternate Disposal Authorization Requests," August 24, 2015, p. 2, ML15125A364. <https://adamswebsearch2.nrc.gov/webSearch2/view>, which declares that the Site-Specific Dose Assessment Methodology of an operator of a dumpsite not licensed to receive low-level radioactive waste who nonetheless wished to receive such waste and the NRC's Technical Evaluation Report of that model and its inputs "are considered proprietary and will not be available for public review."

¹⁰ NRC, "Transfer of Very Low-Level Waste to Exempt Persons for Disposal," Section V, "Specific Exemptions for Disposal." NRC says the regulations in Parts 30.11, 40.14 and 70.17 to be subject to reinterpretation under this rule are Compatibility Category D, which doesn't require state regulations that are identical to NRC rules. *ibid.*, Section III, "Proposed Interpretive Rule."

Under the NRC proposal, once the dumpsite is granted the exemption, the NRC will no longer have any oversight or enforcement authority over the site, the waste, or public exposures to assure that the site is run safely and that the already-too-high supposed dose limit is not exceeded.¹¹ There would be no NRC inspections, no fines for violation, no authority to take action if closure or post-closure is not undertaken safely, etc.

UNDER THE PROPOSAL, AN UNLICENSED MUNICIPAL DUMP COULD RECEIVE AS MUCH RADIOACTIVE WASTE AS A LICENSED ON, OR EVEN MORE

The NRC is claiming in its proposal that its “intent” is that the exemptions be used for “very low-level radioactive waste,”¹² but admits there is no regulatory or statutory definition for the term.¹³ However, NRC says in the proposed interpretive rule that it covers *all* radioactive waste to be received at an unlicensed dump that would collectively be estimated by the dump operator to produce up to 25 millirem per year of radiation to a member of the public.¹⁴

A licensed “low-level” radioactive waste disposal facility is restricted to producing 25 millirem per year to the whole body or to any critical organ (other than the thyroid, which is permitted 75 millirem).¹⁵ Thus, on its face, the NRC’s proposal *could allow as much radioactive waste to go to an unlicensed site as now goes to a licensed one.*

Further, NRC’s proposal appears to use a different, more lax measure of radiation dose than is used in the current regulations for a licensed disposal site. It would allow *more* radioactive waste to go to an unlicensed dump than a licensed radwaste disposal facility, and *more* radiation exposure to the public result from the unlicensed site than is allowed for the licensed site.

NRC appears to be proposing that an unlicensed site be allowed to receive radioactive waste if the dump operator’s estimate is that it would produce 25 millirem per year “effective dose equivalent,” or EDE, rather than actual dose. EDE is a controversial modification of actual dose that takes the dose to an organ and reduces it by averaging it over the whole body and further altering the value by “tissue-dependent weighting factors [that] are a set of subjective committee

¹¹ Statement by Chris McKenney, Branch Chief for the Risk and Technical Analysis Branch, Division of Decommissioning, Uranium Recovery, and Waste Programs, Official Transcript of Proceedings: “Category 3 Meeting on Draft Interpretive Rule for Very Low-level Waste (VLLW) Disposal Activities,” March 31, 2020, ML20112F441, p. 12.

¹² NRC’s claim of its current “intent” is meaningless and unenforceable, given that, as it admits, the term “very low-level waste” is not set in either statute or regulation. Non-binding assertions of intent, absent regulatory or statutory restrictions, have no proscriptive power.

¹³ NRC, “Transfer of Very Low-Level Waste to Exempt Persons for Disposal,” Section IV, “Discussion.”

¹⁴ NRC, “Transfer of Very Low-Level Waste to Exempt Persons for Disposal,” Section V, “Specific Exemptions for Disposal.”

¹⁵ 10 CFR § 61.41.

defined numbers.”¹⁶ “The effective dose represents questionable science” and “is prone to misuse.”¹⁷

The current regulations for low-level radioactive waste disposal, for example, would restrict the amount of strontium-90 in licensed disposal sites to levels that would produce no more than 25 millirem per year to the bone, the critical organ.¹⁸ But a 25 millirem per year dose to the bone would be claimed to be only a small fraction (about one tenth) of 25 millirem EDE under the NRC’s new proposal, and thus much more strontium-90 could be allowed in the unlicensed dump than in the licensed facility.¹⁹ That is in part because NRC takes the actual dose to the bone and dilutes it over the rest of the body to create a lower EDE.

EPA indicates that one would have to, on average, limit EDE to 10 millirem per year in order to have the same protectiveness as the current limit for licensed sites of 25 millirem to the whole body, 75 millirem to the thyroid, and 25 millirem to any other critical organ.²⁰ So the NRC proposal of 25 millirem EDE for an unlicensed dumpsite would actually allow 2.5 times as much radiation to the public from an unlicensed dump than from a licensed radioactive waste disposal site.

The NRC proposal thus clearly is not limited to “very low-level waste,” but could allow a regular garbage dump to take as much or more of all classes of “low-level radioactive waste” as one licensed and designed for such waste.

Considering that it is much more expensive to operate a licensed radwaste disposal facility than an unlicensed, normal garbage landfill (because of the cost of meeting the safety requirements for the former),²¹ and thus the “tipping fee” at the latter is far lower, this proposed deregulation by NRC would render licensed sites virtually obsolete due to lower cost to the waste generator to dump its waste at the local garbage dump.

¹⁶ U.S. Nuclear Regulatory Commission, “Effective Dose Equivalent,” March 21, 2019. <https://www.nrc.gov/reading-rm/basic-ref/glossary/effective-dose-equivalent.html>; D. J. Brenner, “Effective Dose: A Flawed Concept That Could and Should be Replaced,” *British Journal of Radiology*, 81 (2008), 521–523.

¹⁷ Brenner, *supra*.

¹⁸ 10 CFR § 61.41.

¹⁹ COMPARISON OF CRITICAL ORGAN AND EDE RADIATION DOSE RATE LIMITS FOR SITUATIONS INVOLVING CONTAMINATED LAND, Prepared for USEPA by S. Cohen & Associates, Inc., April 18, 1997, Exhibits ES-3, 4, and 5.

²⁰ U.S. Environmental Protection Agency, “Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination,” August 22, 1997, cover letter p. 5, fn. 11; and Attachment B, p. 4. <https://semspub.epa.gov/work/HQ/176331.pdf>. For key radionuclides of concern at contaminated sites, the difference is even greater; one would have to limit EDE to even lower levels than 10 millirem, on average 7 millirem EDE for residential exposure scenarios. Cohen, *supra*, p.iii.

²¹ 10 CFR Part 61; U.S. Nuclear Regulatory Commission, “Low-Level Waste Disposal.” <https://www.nrc.gov/waste/llw-disposal.html>

The NRC is proposing this “interpretive” rule in an attempt to revive the dying nuclear industry – allowing it to ship large quantities of radioactive waste to unlicensed dump would lower the costs for decommissioning nuclear plants significantly. This reduced cost would be profitable for the industry but would in effect be transferred to the public in terms of health impacts.

NRC is breaching numerous legal and regulatory requirements to push through this massive deregulation of radioactive waste.

Rather than actually changing the regulations, the NRC is claiming to merely reinterpret existing regulations.²² However, what it is really doing is in effect rescinding the entire 10 CFR 61 regulations specifying safety and licensing requirements for land disposal of radioactive waste.²³ NRC is rescinding those fundamental regulations without following the rulemaking requirements of law.

By misrepresenting this radical change in its regulations as a mere “interpretive change,” NRC is bypassing the Administrative Procedure Act.²⁴ Indeed, NRC is hiding from the public the actual language that it is proposing to adopt.²⁵ Meaningful comment is impossible when one cannot even see what language is proposed. Furthermore, claims about NRC’s “intent” have no binding force if critical terms like “very low-level radioactive waste” are not defined in statute or regulation.

The action is arbitrary and capricious, as NRC had failed to provide a basis for determining that its decades-long existing interpretation of the regulations was wrong.

NRC is also violating the National Environmental Policy Act, by failing to conduct any environmental review of this proposal, one which is clearly a significant federal action that could have major environmental impacts.²⁶ One notes that EIS’s have been required for NRC

²² NRC, “Transfer of Very Low-Level Waste to Exempt Persons for Disposal,” Summary.

²³ 10 CFR Part 61.

²⁴ Administrative Procedure Act (5 U.S.C. §553. Rule making.)

²⁵ Under normal circumstances, a proposed rulemaking notice in the Federal Register would include the text of the proposed revised rule, but there is no such language provided here. Furthermore, in its notice, NRC merely says it plans to alter an existing guidance document that requires disposal of licensed radioactive material at a licensed radioactive waste disposal site, but it does not provide the draft new guidance for review and comment, so matters such as how NRC would review such requests are hidden from scrutiny and input. NRC’s claims about its current “intent” to in the future limit the scope of the actions proposed to be allowed are meaningless.

²⁶ The National Environmental Policy Act of 1969, as amended (42 U.S.C. §4321 et seq.) “Section 102 in Title I of the Act requires federal agencies to incorporate environmental considerations in their planning and decision-making through a systematic interdisciplinary approach. Specifically, all federal agencies are to prepare detailed statements assessing the environmental impact of and alternatives to major federal actions significantly affecting the environment. These statements are commonly referred to as Environmental Impact Statements (EIS) and Environmental Assessments (EA).” <https://www.epa.gov/nepa/what-national-environmental-policy-act>

approvals of individual licensed LLRW disposal sites, which as discussed above, are limited to 25/75/25 millirem doses to the public, whereas this new proposal by NRC would allow multiple unlicensed LLRW disposal sites with doses that are approximately 2.5 times higher — yet without any EIS for the proposal.

Furthermore, the proposal includes no commitment to conduct any environmental review and allow public comment thereon for requests to operate unlicensed radioactive waste disposal sites should the proposal be adopted. The environmental impacts are potentially significantly greater from an unlicensed site allowed to produce 2.5 times more radiation exposure to the public than a licensed site, for which an EIS is required. However, the proposal includes no requirement for an EIS, or indeed, for any environmental review, for granting such authorizations to operate an unlicensed radioactive waste dump.²⁷

NRC is also violating the Atomic Energy Act (AEA),²⁸ which, at its heart, requires licensing of nuclear materials and activities as well as public notice and the right to a hearing over any application for such a license. While very limited exceptions are currently permitted on the margin, here NRC is proposing to exempt most of the arena of radioactive waste disposal, other than spent fuel, from the AEA licensing and hearing requirements.

Finally, the proposed rule envisions these requests to become an unlicensed dump being handled in secret — therefore no right to public notice, no opportunity for adjudicatory hearing, no opportunity to comment on an environmental impact statement or environmental assessment. The public would never know that a local landfill had requested the right to receive large amounts of nuclear waste, exempt from licensing and regulation. The public could not request a hearing; there would be no draft EIS or EA to review and comment on.²⁹ These matters of great public importance and potential serious risk to public health and environment would be done under cover of darkness. The public would never know, let alone have the right to review, comment on, or request a hearing for a proposal to dump large amounts of radioactive waste in their neighborhood at sites not designed or licensed for radioactive waste. Indeed, under this extraordinary proposal, the public might never even know that radioactive waste was being disposed of in an unlicensed garbage dump, not designed for such wastes, in their own community.

²⁷ NRC's guidance for 10 CFR §20.2002 exemptions does not require even Environmental Assessments for all proposals to ship LLRW to unlicensed sites, and if an EA is performed, NRC's guidance is that the EA is not made publicly available for review and comment, and is only made public after the fact, once it has been approved. NRC, GUIDANCE FOR THE REVIEWS OF PROPOSED DISPOSAL PROCEDURES AND TRANSFERS OF RADIOACTIVE MATERIAL UNDER 10 CFR 20.2002 AND 10 CFR 40.13(A), April 2020, pp. 23-25. The current far broader proposal makes no commitment whatsoever regarding NEPA for allowing an unlicensed radioactive waste dump.

²⁸ Atomic Energy Act of 1946, 42 U.S.C. §2011 et seq.

²⁹ As indicated above, NRC currently has been waiving disposal requirements on a case by case basis, with either no EA or EIS at all, or if there is an EA, it is made public only after approval, thus preventing public to review or comment before it is adopted. The new proposal contains no requirements whatsoever for environmental review or right of review.

1. NRC WILL HAVE NO CONTINUED OVERSIGHT OR REGULATORY AUTHORITY OVER THE RADIOACTIVE WASTE ONCE IT HAS BEEN TRANSFERRED TO AN EXEMPT FACILITY.

Under the proposed VLLW rule, once NRC grants someone an exemption to dispose of radioactive waste without a license to do so, NRC will have no continued oversight or regulatory authority over the radioactive waste or the facility that receives it.³⁰

2. THE RADIOACTIVE WASTE WILL SUPPOSEDLY REMAIN LICENSED, BUT THERE WOULD BE NO LICENSE HOLDER.

Under the proposal, NRC claims the radioactive materials would remain licensed materials. However, *there would be no license holder*—since it was sent to a facility granted an exemption from licensing, they wouldn’t be the license holder, and the entity that previously held the license (e.g., a nuclear plant being decommissioned) would also not be the license holder (since decommissioning ends in license termination.) It makes no sense that material could be licensed but no one holds the license to it. Indeed, there would be no license for it.

3. NO ONE WOULD BE RESPONSIBLE FOR OR HAVE AUTHORITY FOR ACTING SHOULD THERE BE LEAKAGE OR OTHER PROBLEMS

If radioactivity from waste transferred to an exempt facility leaks into the environment, as it has at many disposal facilities licensed to receive radioactive waste, under this proposal, unlike for licensed sites, no one would be responsible for or empowered to remedy the situation. NRC would have given up its authority, the facility itself would be exempt from NRC rules, and regulators of Part C and D facilities (if the waste were sent to one) do not have authority over Atomic Energy Act radioactive materials. No one could be held accountable and no one would be responsible to intervene should the waste result in a release to the environment.

The NRC says the waste will go to “regulated” facilities but they are not regulated for radioactive materials. Municipal garbage dumps and hazardous waste disposal facilities are regulated, but only as to their garbage or chemical wastes. Sending radioactive wastes to them without requiring them to have a radioactive materials license would be sending them to a facility for which no entity has regulatory authority.

4. POTENTIAL FOR RECYCLING OF CONTAMINATED METALS AND OTHER MATERIALS AND SUCH CONTAMINATED MATERIALS ENTERING COMMERCIAL SUPPLIES

Once the radioactive waste is transferred to an exempt person, it will exist in a regulatory black hole – meaning no entity will be accountable for it. This poses the potential for the waste to be recirculated into the commercial waste stream as recycled material, particularly radioactive metals that could be sold as scrap, but also radioactive tools that could be sold, or contaminated concrete and asphalt that could be recycled. The potential for radioactive metal, for example,

³⁰ Statement by Chris McKenney. *Official Transcript of Proceedings: “Category 3 Meeting on Draft Interpretive Rule for Very Low-level Waste (VLLW) Disposal Activities,”* March 31, 2020.

enter the consumer metal supply could pose a serious risk to public health, whereby belt buckles, zippers, children's toys, etc. could be made out of metal recycled from radioactive reactor parts.

Furthermore, if the LLW proposal were approved, rescinding decades of NRC interpretation that a license is required to receive radioactive materials, holders of such licensed materials could request exemptions to allow recycling. The changed interpretation, that licenses aren't required to receive such materials, could open the door to such recycling, and widespread exposures to the public from recycled contaminated metals and other materials. NRC's claim that its current "intent" is to only use the exemptions under the reinterpretation for land disposal is non-binding, since the reinterpretation of the requirement for a license to receive radioactive materials would be lifted by this proposal, allowing transfer in the future not just for land disposal but also for recycling. Since disposal costs money but scrap metal can be sold, radioactive recycling would be allowable under this supposed reinterpretation of NRC's long-held prohibition on such unlicensed transfers.

5. THE RADIOACTIVE MATERIALS WOULD HAVE NO REGULATOR—IT WOULD BE IN A REGULATORY LIMBO OR VACUUM.

NRC would have given up its regulatory authority, and regulators of RCRA facilities wouldn't have regulatory authority over the AEA radioactive materials as they aren't covered by RCRA.

6. THE SYNERGISTIC ENVIRONMENTAL AND PUBLIC HEALTH IMPACTS OF COMBINING RADIOACTIVE AND CHEMICAL WASTES OR RADIOACTIVE AND MUNICIPAL WASTES HAVE NOT BEEN MENTIONED, LET ALONE ADDRESSED

a. Mixing radioactive wastes with chemical and/or organic wastes can result in markedly increasing the migration rates for the radioactivity through moisture in soil. Organic complexing agents, or stronger chelating compounds, in chemical and/or municipal wastes can combine with radionuclides to alter the soil retention factor (Kd) and increase the speed by which the radionuclides migrate in the environment. Thus, allowing radioactive waste to be disposed of in dumpsites designed for chemical wastes or regular garbage can cause the radioactivity to travel out of the disposal facility and into the environment far faster than had the materials been isolated in a facility limited to radioactive waste.³¹

b. Disposing of radioactive waste in a dumpsite containing regular garbage can result in fires and/or explosions that can release radioactivity into the air. Regular garbage dumps contain large amounts of organic material which, as it decomposes, releases methane, which can burn or explode. They also contain substantial amounts of organic materials that can catch fire. For example, nuclear wastes from the Manhattan Project were inappropriately disposed of in the Westlake, Missouri, regular municipal dump, now a Superfund site. Portions of the garbage dump caught fire a decade ago, and a subsurface fire has continued now for years, advancing toward the radioactive waste.³²

³¹ "Chelation and Kd Values: The Effect on Radionuclide Migration," in Southern California Federation of Scientists & Committee to Bridge the Gap, *The Proposed Ward Valley Radioactive Waste Facility: Papers Submitted to the National Academy of Sciences*, October 12, 1994

³² Robert Alvarez, "West Lake story: An underground fire, radioactive waste, and governmental failure," *The Bulletin of the Atomic Scientists*, February 11, 2016

7. RISK OF BECOMING THE WORLD'S DUMPING GROUND FOR RADIOACTIVE WASTE

The VLW proposal would result in unlicensed landfills being able to take any radioactive waste for which it has received an exemption by the NRC, with NRC no longer exercising any control over such shipments. Nothing would prevent such dumpsites from attracting such radioactive wastes from other countries, because the disposal cost would be vastly lower than in a licensed site in their own country, and NRC would have given up its regulatory authority over disposals at such unlicensed sites.

8. NOTHING IN THE PROPOSAL WOULD LIMIT RADIOACTIVE WASTE DISPOSAL TO PART C AND D LANDFILLS. IT COULD GO VIRTUALLY ANYWHERE

The NRC's proposed "reinterpretation" of its regulations to allow transfer of licensed radioactive wastes to unlicensed persons would allow NRC to exempt not just Part C and D landfills but would permit unlicensed transfer of such wastes to potentially anyone with some vacant land that they wanted to make some money from, e.g. it could go to a vacant lot next to a school, to It is breathtaking in its scope.

9. VIOLATES NEPA BOTH IN PROMULGATION OF THE RULE AND IN CARRYING IT OUT

No EIS has been performed of the environmental impacts of the proposed rule. Similarly, no EIS appears contemplated under the proposal for approving any requests to be exempted from radioactive waste disposal licensing requirements. Both deficiencies violate NEPA.

Conclusion

NRC's proposal to deregulate a large fraction—perhaps almost all—radioactive waste other than irradiated nuclear fuel is fraught with peril and would violate numerous laws. NRC should reverse course and strengthen, rather than weaken, protections of the public and environment from radioactive waste.

Sincerely,



Jeff Ruch
Pacific Director