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Alliance for Nuclear Accountability

A national network of organizations working to address issues of nuclear weapons production and waste cleanup

- Member Groups
- American Friends Service Committee
Denver, CO
- Blue Ridge Environmental Defense League
Clondale Springs, NC
- Carolina Peace Resource Center
Columbia, NC
- Citizen Alert
Las Vegas, NV
- Coalition for Health & Environment
Kevil, KY
- Concerned Citizens for Nuclear Safety
Santa Fe, NM
- Fernald Residents for Environmental Safety and Health, Inc.
Ross, OH
- Global Resource Action Center for the Environment
New York, NY
- Government Accountability Project
Seattle, WA
- Heart of America Northwest
Seattle, WA
- Los Alamos Study Group
Santa Fe, NM
- Miamisburg Environmental Safety & Health
Miamisburg, OH
- National Environmental Coalition of Native Americans
Prairie, OK
- Neighbors in Need
Englewood, OH
- Nuclear Watch of New Mexico
Santa Fe, NM
- Oak Ridge Environmental Peace Alliance
Oak Ridge, TN
- Panhandle Area Neighbors and Landowners
Panhaville, TX
- Peace Action / Radiation Front
Washington, TX
- Peace Farm
Panhaville, TX
- Physicians for Social Responsibility
Washington, DC
- Pittsburgh/Pikeston Residents for Environmental Safety and Security
McDermott, OH
- Rocky Mountain Peace and Justice Center
Boulder, CO
- Southern Texans Against Nuclear Dumping
Amarillo, TX
- Shoshone Network
Pahrump, NV
- Snake River Alliance
Boise, ID
- Southwest Research and Information Center
Albuquerque, NM
- Tin Valley (ARFA)
Livermore, CA
- Western States Legal Foundation
Oakland, CA
- Women's Action for New Directions
Wilmington, MA

DOCKET NUMBER
PROPOSED RULES **40**
(67FR55175)

DOCKETED
USNRC

November 7, 2002

November 14, 2002 (11:30AM)

Secretary
U.S. Nuclear Regulatory Commission
ATT: Rulemakings and Adjudications Staff
Washington, D.C. 20555-0001

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Richard A. Meserve Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

RE: Comments on Proposed Rule Amending 10 CFR Part 40, allowing transfer of radioactive materials that could result in radiation doses to the public from "transfers" (e.g., disposal in landfills) of Uranium, Thorium and other "source" materials of up to 100 millirem per year

Summary:

- An Environmental Impact Statement (EIS) is required with specific mitigation measures,
- Federal Register Notice falsely stated that NRC had prepared an Environmental Assessment and considered health and environmental impacts.
- The NRC proposed rule would allow disposal of Uranium and Thorium in unlicensed disposal facilities even when disposal would result in radiation doses to the general public with cancer risks as high as 2 in 1,000. The NRC proposed rule is so lax, that the NRC might approve transfers and disposal even if the dose was even greater than 100 mrem/year, with a cancer risk greater than 2 in 1,000 (21:-3). This proposed rule fails to meet the laudable purpose for adopting a rule for transfers in order to protect health and safety.
- NRC should adopt a standard for approving disposal of Uranium, Thorium, and Source Materials consistent with the maximum cancer risk allowable under the National Contingency Plan and applicable state standards for cleanup from releases from disposal facilities. This would be economically efficient, and avoid health and environmental impacts. The NRC is required to consider this alternative, and the benefits of having one consistent standard, in an Environmental Impact Statement.

(continued on next page)

Citizen Groups' Letter to NRC Objecting to Unregulated Radioactive Waste Transfer/Disposal Rule Page 1

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Template = SECY-067

SECY-02

Dear Chairman Meserve, Secretary and Rulemaking Staff:

The broad range of undersigned organizations, concerned with the cleanup of radioactive waste disposal or release sites and protection of public health, object in the strongest manner to the proposed adoption of a rule allowing transfer of radioactive materials that could result in radiation doses to the public from "transfers" (e.g., disposal in unlicensed landfills) of Uranium, Thorium and other "source" materials of up to 100 millirem per year. This proposed rule is acknowledged by the NRC to have probable significant environmental and human health impacts. In the Federal Register Notice, NRC falsely claimed to have considered the environmental and health impacts in an Environmental Assessment, which the Notice stated was available for comment. However, this statement in the Federal Register Notice was false. No Environmental Assessment was prepared, and NRC has no record of consideration of impacts, alternatives and mitigation measures. Therefore, the proposed adoption of the rule by the Nuclear Regulatory Commission is a serious violation of the National Environmental Policy Act, which requires that an Environmental Impact Statement (EIS) must be prepared to consider the health and environmental impacts, alternatives and mitigation measures, from this proposed action.

Doses of 100 millirem per year would result in 20 fatal cancers per ten thousand exposed adults, as calculated by NRC in its own documents (2 in 1,000; or, 2E-3)ⁱ. Furthermore, other NRC documents reveal that NRC's own analyses of this rule show that doses could reach 200 mrem/year, which would result in an estimated 4 fatal cancers per 1,000 exposed adultsⁱⁱ. Uranium, Thorium and other Source Materials disposed in unlicensed and unregulated landfills, or transferred to unlicensed parties for uses to which there may be worker or public exposure, therefore, are likely to result in new Superfund or state hazardous materials release cleanups.

Any action that can result in exposures with cancer risks of 2 in 1,000 (2E-3) or, result in exposures with risks that are far greater than the cancer risk allowed for cleanup of facilities when such materials are released to the environment, is an action with a probable significant impact on human health and the environment.

EPA has formally determined that exposures of 25 millirem per year at Superfund Clean-Up sites are not "protective of human health and the environment" because exposure would result in risks of cancer far in excess of the allowable range under the National Contingency Planⁱⁱⁱ, which is from one in a million to a cancer risk of no more than one in ten thousand. Furthermore, numerous states, including Washington, have laws and standards that require cleanup of landfills or other sources of public exposure from releases if the cancer risk from exposure is greater than one in one hundred thousand from all combined carcinogens, and one in a million from any single carcinogenic source.^{iv}

It is clear that the proposed action, which is admitted to have the potential to expose workers and the public to radiation doses far in excess of these other standards, has the potential to harm human health and the environment. Thus, an Environmental Impact Statement must be prepared, which should consider impacts, alternatives and describe the specific mitigation measures that the NRC will take to avoid identified impacts.

We are deeply troubled by the misleading and false statements in the Federal Register Notice that the NRC had prepared an Environmental Assessment and Finding of No Significant Impact in support of the proposed rule, after consideration of potential health and environmental

impacts. This statement appears in the Section of the Notice entitled: "Finding of No Significant Environmental Impact Availability". In the Federal Register, NRC falsely stated:

"the Commission has concluded on the basis of an environmental assessment that this proposed rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment." 67 FR 55177.

The Federal Register Notice also misleadingly states: "The NRC has sent a copy of the Environmental Assessment ... to every State Liaison Office and requested their comments on the Environmental Assessment. The Environmental Assessment may be examined at the NRC Public Document Room... Single copies of the environmental assessment are available from Gary Comfort...of the Office of Nuclear Material Safety and Safeguards." 67 FR 55177-55178

In fact, NRC has NOT prepared an Environmental Assessment and none is available for review and comment. Nor is a Finding of No Significant Impact (FONSI) available for review.

We contacted NRC and requested copies of the Environmental Assessment and FONSI, per directions in the Federal Register Notice (referred to below as "FRN"). After repeated delays and failed efforts to find such documents, in order for us to comment on the basis for concluding that this proposed action would not have significant environmental or health impacts, Mr. Comfort, Sr. Project Manager, NRC, responded^v :

"It appears that some boiler plate language was placed into the FRN at the last moment that may be misleading. The language, included in the FRN, is the entire EA. Because the analysis was straight forward and concise, it was included in its entirety in the FRN and there is no separate EA

I apologize for the confusion."

As disclosed in Mr. Comfort's email to attorney Gerald Pollet, NRC did not prepare an Environmental Assessment. The statement in the Federal Register Notice that one was prepared and relied upon was misleading and a violation of the Administrative Procedures Act as well as NEPA. Without an Environmental Assessment, as we note below, there is no administrative record of NRC consideration of impacts, alternatives and mitigation measures

NRC must fully consider alternatives to accomplish the stated purpose of the rule amendment: to protect health and safety, as well as the potential impacts of the proposal on health and the environment. NRC acknowledges that current transfers pose the potential to impact health and safety.

Further, NRC must consider and commit to specific mitigation measures.^{vi} The current rule, setting a threshold of 0.05% source material, below which material may be transferred to unlicensed persons or facilities (i.e., for disposal), was set solely based on consideration of what concentration was economically and practically feasible to be a source of fissionable material.

For adoption of this proposed rule, NRC has no record of considering:

- a) how to mitigate the potential for health and environmental impacts
 - Rather, the NRC proposed rule states that the NRC will consider transfer approvals on a case by case basis when the potential exists for doses to be above 25 mrem/year and up to 100 mrem/year. This fails to meet the fundamental

requirements of NEPA and CEQ implementing rules for consideration and adoption of specific measures for mitigation of impacts.

- b) the health impacts on both the general public from potential doses of up to 100 mrem from disposal in unlicensed facilities (RCRA permits for different hazardous wastes are not designed to ensure caps and other measures are protective for these long-lived radionuclides), and on higher risk populations who may be more sensitive or have higher exposure under reasonably foreseeable exposure scenarios. Indeed, there is no record that the NRC can point to in support of the claim that the rule will not have significant impacts on these populations at disposal facilities
- The Federal Register Notice for this Proposed Rule states that the NRC might approve transfers “that could potentially result in doses to a member of the public above 1mSv/yr (100mrem/yr)”
 - i. Such transfers would have an undeniable potential significant impact on human health
 - ii. NRC fails to consider and adopt any specific mitigation measures
 - iii. For transfer for “other purposes (than disposal) such as recycle or indirect disposal”, the NRC proposed rule would simply leave standards and impacts up to individual case by case consideration. This fails to meet the requirement for consideration and adoption of specific mitigation measures
- c) The reasonable alternative of requiring that transfers for disposal not result in any release or exposure to the public where the dose would result in a cancer risk greater than that allowed under CERCLA’s National Contingency Plan (40 CFR 300), which would be a risk of $1E-4$ or a dose of 15 mrem, and, requiring that applicable or relevant state standards for maximum exposure to carcinogens and hazardous substances also be met.
- **The alternative of having one uniform standard applicable to the allowable radiation exposure, dose and carcinogen risk from releases at disposal facilities has clear advantages over multiple standards.**
 - The NRC rule can not pre-empt the application of CERCLA and applicable state cleanup standards for disposal sites with releases to the environment. Thus, the approval of such transfers with the potential to have doses up to 100 mrem/year, equates to the approval of disposal in a manner that will lead to the release of radionuclides requiring cleanup under Superfund or state superfund cleanup laws.
 - i. This is a potential significant health and environmental impact, requiring the preparation of an EIS.
 - ii. Economic efficiency, as well as avoidance of health and environmental impacts, argue for the adoption by the NRC of *a standard for disposal approval only in facilities where licensing and permits are in place, based on appropriate risk assessments, to assure that the disposal of these Uranium, Thorium and Source materials do not result in any dose greater than 15 mrem/year and a carcinogen risk no greater than that allowed under the National Contingency Plan, consistent with EPA’s CERCLA requirements and more stringent applicable state standards.*
 - iii. If NRC does not address these potential impacts and mitigation measures in a programmatic EIS on this proposed rule, then EISes will have to be prepared prior to individual transfer approvals, and consider all impacts

and adoption of mitigation measures for any transfer where there is a potential for a dose to any member of the public in excess of either 15 mrem/yr or, which would result in a carcinogen risk greater than that allowed under the National Contingency Plan or applicable state standards.

1. If the NRC rule was consistent with CERCLA's maximum carcinogen risk for release from a disposal facility and applicable state standards, and licensed facilities were required for disposal, then an EIS would not be required. This is because there would be no additional impact from disposal – since the facilities would not be adding risks greater than those that are otherwise permitted, and would not require additional cleanup measures for such facilities in the future. This would also meet the requirement for consideration and adoption of mitigation measures.
- iv. 15 mrem of annual exposure also will result in a health risk that is greater than the maximum carcinogen risk permissible under other standards or the National Contingency Plan. This rule needs to ensure that exposure from disposal will not result in carcinogen risks to sensitive populations or individuals that exceeds these applicable or relevant standards.
- d) The increased health impact from adopting a standard that could result in a 10 millirem greater annual exposure to the public from disposal sites or releases of Uranium and Thorium than EPA has determined is protective of public health and the environment, consistent with the National Contingency Plan.
- EPA has formally determined that a 25 millirem dose limit “is not protective”
 - i. In reviewing similar dose limits in NRC's Radiological Criteria for License Termination (see 62 FR 39058, July 21, 1997), EPA found:

“The NRC rule allows a cleanup level of 25 mrem/yr EDE (equivalent to approximately 5×10^{-4} lifetime risk) with exemptions allowing cleanup levels of up to 100 mrem/yr EDE (equivalent to approximately 2×10^{-3} lifetime risk). These limits are beyond the upper bound of the risk range generally considered protective under CERCLA. In addition, they present risks that are higher than levels EPA has found to be protective for carcinogens in general and for radiation, in particular, in other contexts. EPA has no technical or policy basis to conclude that these levels are protective under CERCLA.”^{vii}
 - The BEIR- 5 report calculated that the additional 10 millirem of dose would cause a fatal cancer in ten out of every 40,000 persons exposed; or, one out of every 530 persons exposed.
 - Thus, adoption of any standard that has a 10 mrem/year potential dose to members of the public than the dose allowed in determining remedial action levels under the National Contingency Plan, and which is a relevant standard for determining performance requirements for disposal sites, has a clear and significant impact on human health and the environment – requiring an Environmental Impact Statement.

- e) Environmental impacts from transfers, including for disposal, of Uranium, Thorium Source Materials of up to 00.5%
- Impacts on ecological receptors have not been considered in any fashion.
 - At Hanford, our experience shows that Uranium in low concentrations disposed to soil continues to contaminate groundwater and is impacting aquatic organisms.^{viii}

In conclusion, we are supportive of the NRC addressing the lack of public health and environmental impacts from transfers and disposal of source materials that may result in significant radiation exposure to the public and cancer risks. NRC should consider the multitude of benefits from adopting a standard that is consistent with the standard applicable to cleanup of releases, and assessment of performance standards for disposal facilities, under the Superfund National Contingency Plan and applicable state cleanup and exposure standards. NRC should consider that related proposals for license termination, cleanup of mill tailing facilities and FUSRAP sites, as well as these transfers, should all be subject to the same consistent radiation exposure and carcinogen risk standard adopted pursuant to the statutory mandate that the standard "assures protection of human health and the environment" in 42 USC 9621(d). Related actions are required to be considered in an EIS. A Programmatic EIS should be prepared considering the alternative of adopting one consistent standard that is protective of human health and the environment for disposal of all similar materials; e.g., Uranium, Thorium and Source Materials <.005%; mill tailings produced prior to 1978, and, Uranium wastes from FUSRAP sites. Such a standard should be consistent with the National Contingency Plan standards for protection of public health from carcinogen risks, CERCLA and other applicable or relevant standards. Adoption of any rule that is not consistent with the National Contingency Plan and state standards (including groundwater protection) will have a probable significant environmental impact, and requires the preparation of an EIS.

The false statement in the Federal Register Notice that an Environmental Assessment was prepared and impacts considered, was not only a violation of NEPA and the APA, but also a material and substantive violation of individual's rights to a healthful environment. NRC failed to consider any of the human health and environmental impacts from adopting a rule that would permit the disposal of Uranium and Thorium, or transfer to unlicensed persons, while acknowledging that the rule would routinely allow radiation doses to the public of up to 100mrem/year, and up to 200 mrem/year in unspecified circumstances. NRC failed to meet its duty to specify mitigation measures to reduce the impacts on health and the environment, instead proposing to rely upon case by case determinations without any indication of mitigation measures or standards to be applied. Those radiation doses translate to cancer risks of 2 in 1,000 and 4 in 1,000 for adults, respectively. NRC should adopt a standard allowing unlicensed transfer and disposal of Uranium and Thorium only when the NRC can be assured that the transfer will not result in exposure greater than the cancer risk and radiation dose deemed to meet the "protective of human health and the environment" standard in the National Contingency Plan (15 mrem/year and a maximum cancer risk to the public ranging from 1 in 1,000,000 to 1 in 10,000). There are clear economic benefits as well as clear health and environmental benefits from adoption of a standard that will not result in the creation of new Superfund cleanup sites. NRC's approach – allowing unlicensed disposal sites to take wastes resulting in radiation doses to the public of 100 mrem/year and cancer risks to adults of 2 in 1,000 – will result in disposal sites that have to be cleaned up as Superfund and state hazardous waste cleanup sites.

In addition to the list of member organizations of the Alliance for Nuclear Accountability listed on page one, additional signatory organizations are listed below.

Heart of America Northwest
 Citizens for Clean Eastern Washington
 Columbia RiverKeeper
 David McCoy, Attorney at Law
 National Nuclear Workers for Justice
 The Radio Activist campaign
 Sierra Club, Cascade Chapter
 Washington Physicians for Social Responsibility

Please include all organizations on your notice and comment lists for this and related actions. Please address inquiries regarding these comments to

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End Notes:

¹ See "Analysis of what Radiation Dose Limit is Protective of Human Health at CERCLA Sites (Including Review of dose Limits in NRC Decommissioning rule), U.S. Environmental Protection Agency, August 20, 1997; and, See NRC's Radiological Criteria for License Termination (see 62 FR 39058, July 21, 1997)

² "Systematic Radiological Assessment of Exemptions for Source and Byproduct Materials." NUREG-1717, June 2001, Advanced Technologies and Laboratories International, Inc ("Options Paper: Exemption in 10 CFR 40 for <0.05% Source Material")

³ 40 CFR 300; The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended. 42 USCA 9601 et seq.

⁴ See Washington Model Toxics Control Act, and implementing regulations at Chapter 173-340 Washington Administrative Code.

⁵ Email from Gary Comfort, Sr. Project Manager, Nuclear Regulatory Commission, October 23, 2002, to Gerald Pollet, executive director and general counsel, Heart of America Northwest and Legal Advocates for Washington.

⁶ 10 CFR Part 1021.331(a) and 57 FR 15128.

⁷ Sections 1.2 and 2.0 "Analysis of what Radiation Dose Limit is Protective of Human Health at CERCLA Sites (Including Review of dose Limits in NRC Decommissioning rule) August 20, 1997 See Section 2.0: "Dose Limits in NRC's Rule are not Protective".

⁸ PNNL 2001. Uranium impacts to aquatic organisms in the Hanford Reach of the Columbia River are estimated to be above the acceptable threshold. Further, environmental impacts that the NRC must consider would include the potential for requiring restriction of groundwater use to prevent excess dose to the public. If a facility meets the maximum dose limit under the rule by adopting a closure plan or otherwise restricting a larger area of groundwater from use, then there has been a significant impact on the human environment.