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Comments to the US Nuclear Regulatory Commission on
Release of Solid Materials at Licensed Facilities: Issues Paper, Scoping Process for
Environmental Issues, and Notice of Public Meetings

10 CFR Part 20

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This comment submission supplements several others from our and many other organizations regarding the Nuclear Regulatory Commission's (NRC) request for comment and scoping on the release of radioactive wastes and materials from licensed facilities.

Nuclear Information and Resource Service (NIRS), Public Citizen and hundreds of public interest and environmental organizations and individuals chose to boycott the "enhanced" rulemaking meetings because the primary concept—prohibition of release of radioactive material and wastes from isolation and regulatory control into the marketplace and the environment-- demanded repeatedly by the public in numerous previous "enhanced" rulemaking meetings and venues is excluded from serious consideration by the Commission. It is our hope that the blatant absence of the public and environmental communities from the meetings sends a message to the NRC that we will not legitimize your predetermined process, which is clearly designed to release radioactive materials from regulatory control. We will accept nothing less than the complete isolation of radioactive wastes and materials from nuclear power and weapons from the marketplace and the environment.

Despite the NRC's claim in 1999 that the Commission is only "considering" this rulemaking (that will streamline radioactive releases into the marketplace), the June 30, 1998 Staff Requirements Memo from the Commissioners directs the staff to "promulgate a dose-based regulation for clearance of materials and equipment having residual radioactivity." The..."standard for clearance should not be a detectability standard...should focus on the codified clearance levels above background...that...allows quantities of materials to be released. The rule should be comprehensive and apply to all metals, equipment, and materials including soil..." (underlining in original)

Despite the claim from NRC's contractor and staff that all options are on the table, the Commissioners reinforced their original intent to proceed in a vote in late summer/early fall of 1999.

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What will it take to convince the NRC to PROHIBIT the release of radiation and radioactive materials and wastes from specifically licensed and regulated sites? The resources that are currently being spent to legalize releases and streamline the process of release of radioactivity from regulatory control should be put toward developing more effective systems and requirements for isolating and preventing release and exposures to workers, public and environment.

The process is purported to be open, but we know of at least three secret meetings that were held between NRC and the USDA/National Agricultural Library to proceed with developing standards for release of radioactive soil from regulatory control. This was despite at least three organizations repeatedly requesting information about the meetings and notifying NRC of our intent to attend.

The point is that NRC appears to be moving ahead to release with no intent to do what the public has repeatedly called for—prevent radioactive materials and wastes from release, deregulation, dispersal into the marketplace, regular waste sites and out of regulatory control.

This message has been delivered consistently throughout the past two decades. The message was the same when the government publicly attempted to release radioactive metals (early 1980's) and radioactive materials, emissions, practices, and wastes (BRC in late 1980's-early 1990s) and radioactive sites (during the 1993 Enhanced Rulemaking On Residual Radioactivity--the ERORR process that preceded the NRC's decommissioning rule). The public refuses to accept any additional, unnecessary, preventable exposure from deregulation of radioactivity and radiation from nuclear power and weapons and the nuclear fuel chain.

If NRC sets a standard on radioactive materials and wastes it should be NO RELEASE—that is to require continued regulation and isolation of the materials and wastes. Unfortunately, since the NRC and at least one state (Tennessee) are currently permitting radioactive releases, simply maintaining the status quo is inadequate. Current releases should cease including acceptance of applications for case-by-case releases. Efforts should be redirected to recapturing already-released wastes and materials. This policy of prohibition would be cost-saving for the NRC since no more case-by-case releases would need to be considered. Any resources currently slated to be spent estimating doses the public might receive can be put toward identifying past releases and recapturing them. The generators can pay for whatever costs NRC incurs requiring isolation of the materials.

Because this process is the Scoping for the National Environmental Policy Act (NEPA) requirements, the public is providing clear comments to the NRC—calling for prohibiting release of nuclear wastes and materials. The fact that formal Scoping is underway indicates intent to shorten the timeline until a rulemaking is finalized. It is further evidence that the decision is already made to proceed, or at minimum, continue releasing via current procedures.

Suggesting that development of this rule solves the problem of inconsistency between the current 10 CFR 20 standards allowing radioactive contamination of gasses and liquids by now allowing for contamination of solids is troubling for several reasons.

- 1) The fact that 10 CFR 20 provides legal contamination levels for air, water, sewage and closed nuclear sites does not justify additional contamination of consumer products and building supplies in the marketplace or deregulation of waste to go to regular landfills, incinerators, and recyclers. Since when does NRC see its goal to provide "consistent" contamination and poisoning of the public from every pathway? The argument seems to suggest NRC has been unfair to the solids by denying their right to contamination and release to expose the public.
- 2) The public opposed the adoption of NRC's "new" 10 CFR Part 20, in the early 1990's, because it increased the allowable concentrations of 2/3 of radioisotopes in air and water for workers and the public contamination levels are often a function of the workers.' The method of calculating doses changed and made it more difficult to verify and enforce and increased allowable concentrations of some radionuclides in air and water. Millirems effective dose equivalent (mremse), which were the new dose units, incorporate subjective risk estimates into what should be an objective measurement of dose. In addition to the 100 to 500 mremse annually, a member of the public is allowed to receive 500 more millirems from sewage. Legally, members of the public can get 1 rem (1000 mrem) ede/yr. under the existing radiation "protection" standards in 10 CFR 20.
- 3) The public opposed the major criteria and provisions that were adopted in Subpart E of 10 CFR 20, Radiological Criteria for License Termination. During the Enhanced Rulemaking on Residual Radioactivity (ERORR) in 1993, the public participated and called for isolation of contaminated sites. The final rule allows as much exposure from a closed facility as was allowed during operation, 100 mremse /year (not counting sewage) in many instances. The goal is 25 mrem ede/year with the ability for the site to be left giving off 100 to 500 mrem ede/yr. under some conditions.

Now, the NRC suggests that more radioactive releases IN ADDITION TO THE ONES ALREADY ALLOWED IN 10 CFR 20 (for radiological contamination of air, water, sewage from operating and decommissioned nuclear facilities) are justified because those releases are already allowed! We said "no" to the contamination now legalized in 10 CFR 20 when the opportunities arose. We participated fully only to be completely ignored and claims made that we had been involved in developing rules we oppose. We are again (and still) protesting any current, future and past human-made radiation releases from nuclear power and weapons and the fuel chain.

A major problem with 10 CFR 20 is lack of enforceability of dose-based standards. Assuming one could prove the doses one receives under 10 CFR 20 (which cannot be done practically), the NRC's own risk estimates are that a 100 mrem/yr. annual dose gives a lifetime risk of fatal cancer of 1 in 287 exposed individuals. This is now legal for each operating nuclear site (and legally higher if one considers sewage) and each decommissioned site. What will "consistency" mean for solid exposures? Another X number of (unmeasurable) millirems ede from each all solids, some solids each truckload, each batch, from each radionuclide in each solid, from each kind of solid-aluminum, plastic, concrete, wood, glass, gold, etc?

Whatever dose is chosen by NRC for release of radioactive solids will be a green light to unknown amounts of radiation release because as NRC admits on page 35096, "verifying that

there is *no dose* above natural background could be extremely difficult, if not impossible, to implement...”

The way to amend 10 CFR 20 for consistency is to prohibit radioactive releases from solids, liquids, air and sewage from operating and closed sites. That would be the “consistent,” protective approach and should be evaluated as a solution to the so-called inconsistency problem, in the environmental analysis.

Current releases and petitions for releases should be stopped.

The Atomic Energy Commission’s Regulatory Guide 1.86 from 1973, was developed to clean reactor buildings not result in exposures to the public including intimate contact, continuous exposures. Reg.-Guide 1.86 should not be misused to allow release of radioactive materials into the marketplace, nor should it be weakened by converting to dose-estimates. Where Reg. Gd. 1.86 has been incorporated into licenses, it should be removed so that licensees cannot release radioactive wastes into regular garbage or the marketplace.

What is striking in the issues paper is the choice of

- 1) continuing case-by-case and ongoing releases and
- 2) setting a standard that allows more out, more routinely, exponentially increasing the amount of material and radiation that gets out into direct, regular, multiple contact with people and the environment.

For the public which has clearly stated that NO additional radiation exposures are acceptable, it appears that NRC is simply asking which way we prefer delivery of those additional radiation exposures. Lip service is given to requiring all solids to go to radioactive disposal sites, or some other option that might be suggested, but there is virtually no development of those concepts. Prohibiting releases to the marketplace should not require to the public to provide the alternative management scenario.

When calculating costs, the costs to the public of health effects and suffering must be included, but not knowing where previous releases have gone, there is no data on the effects that they have had. It is unacceptable to assume no effect or minimal effect from that which has already been released. Effort and resources need to be expended to collect previously released nuclear wastes and materials.

In evaluating “restricted” release scenarios, incorporate the costs of monitoring and tracking materials for 10-20 half lives of all the isotopes and costs of implementing restrictions.

How does NRC project to know all of the isotopes present that are being released, or won’t there be a requirement to make that assessment? Based on the misinformation about isotopes present at some nuclear facilities that are currently releasing radioactive materials into the marketplace, the public has no faith in a few isotopes being measured and extrapolating the rest.

The quality, condition, sensitivity and capabilities of detection equipment must be appropriate for the types of radiation being measured. The operators must be properly trained and have an

incentive to detect contamination, which might not be in the best economic interests of the employer hoping to unload large volumes of contaminated material. The public has no faith in those who are dumping their waste into the marketplace adequately self-enforce whatever rules the NRC develops.

Funding to local and state governments will be essential to equip and train public officials to verify suspect materials. The costs of enforcement must be borne by the generators not the public. The liabilities must fall with the generators not the public. The burden of proof must remain with the generators of nuclear wastes and materials.

On the international front, the NRC should immediately cease all promotion of international guidance, unless the goal is redirected to prevention of release and exposure.

Any environmental analysis must evaluate the impact of multiple exposures from all pathways and sources (including exposure from other nuclear and hazardous facilities operations, transport, disposal, etc) and the myriad of released products from around the world. The amount, type and effect of multiple exposures to all members of the population (including the fetus, the elderly, immune-suppressed, etc), on the gene pool, on the environment and other species, on workers and their progeny, including synergistic effects need evaluation along with the options for preventing unwanted exposures. This is probably not realistically possible because it requires too many unverifiable assumptions. But that is what would be required to begin to evaluate some of the risks.

On the moral front, there is simply no justification for the additional risks of release of atomic wastes and materials from licensed facilities where they should be isolated in perpetuity from the environment, workers and the general public.

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