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**Joan Claybrook, President**

May 21, 2003

Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555  
Attention: Rulemaking and Adjudications Staff

RE: DRAFT Comments on scope of "Rulemaking on Controlling the Disposition of Solid Materials" –  
10 CFR Part 20

Dear Secretary:

We are extremely concerned about the possible policy alternatives described in the Commission's February 28, 2003 Federal Register notice regarding the above-named NRC rulemaking, and highly disappointed by the manner in which the scoping is being conducted.

### **History and Public Citizen's Position on the Issue**

Public Citizen's Critical Mass Energy and Environment Program has, along with a host of other consumer, citizen, environmental and industry groups, consistently opposed any and all efforts by the nuclear industry and any agencies that deal with nuclear waste to release and/or "recycle" any quantity of radioactive waste materials into the environment. While Congress revoked the policy of treating any waste materials with low concentrations of radioactivity to be "below regulatory concern" in 1992, a struggling nuclear industry and its captured regulators have continued to promote such practices – albeit using other, creative terminology, such as "beneficial reuse" – in desperate attempts to make a business case for the viability of nuclear endeavors. Our position has always been clear. Citizens should not have the many risks from exposure to radioactivity forced upon them via policies that allow nuclear waste to be released from facilities, dumped in unlicensed landfills, sold or donated to unwitting recipients, incinerated, and even "recycled" into a wide array of industrial materials and everyday consumer products.

In the commission voting record of October 25, 2002, Commissioner Merrifield acknowledged that "there is a potential that the radioactive component may be concentrated in the recycling process or that the material will be recycled in a form resulting in more actual contact with the public." In a situation that could lead to so many unexpected outcomes and untraceable impacts upon public health and the environment generally, a thoroughgoing application of the precautionary principle is certainly in order. Regulatory agencies dealing with radioactivity from nuclear processes should not only have strict and unambiguous policies to isolate and contain such radioactivity to prevent human exposures, programs should also be implemented to track and collect materials that have been deregulated and released thus far – materials that the general public could well be in contact with today.

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While the NRC claims that its “primary mission is to protect public health and safety, and the environment from the effects of radiation from nuclear reactors, materials, and waste facilities,” it has become increasingly clear that the NRC is willing to compromise this mission when the industry it allegedly regulates states a preference for a more lax approach to radiation protection.

The issue of radioactive waste release and “recycling” reveals a basic contradiction between what the NRC claims to be concerned with and what it actually does. While claiming to protect public health and safety; while accepting the linear, no-threshold (LNT) model that “any increase in dose, no matter how small, results in an increase in risk” to human health; and while acknowledging that there is a real potential for recycled radioactive waste materials to have actual contact with the public, the NRC is pushing forward to give us another taste of “Below Regulatory Concern.” It is creating, in essence, a subsidy worth billions of dollars that rewards waste generators for irresponsibly scattering their waste into the unregulated environment and ducking responsibility for any of the consequences.

### **Analysis of Disposition Alternatives**

#### **Alternative 1 – No Action: Retain Current Approach of Allowing Unrestricted Use Using Measurement-based Guidelines**

This option is unacceptable in that it is a variant of the old “Below Regulatory Concern” policy, and that it permits nuclear waste generators to reduce or eliminate the costs of truly protective waste disposition in an NRC-licensed facility, and disperse waste that they have generated into a completely unregulated environment. This alternative exposes the public to radiation without their knowledge or consent, and puts them at risk from the effects of multiple, additive and cumulative exposures and their synergistic effects with non-radioactive hazards. What the NRC currently allows of its licensees is unacceptable.

#### **Alternative 2 – Dose-Based Regulation on Unrestricted Use**

This option is completely unacceptable for several reasons:

A. First and foremost, the unrestricted use of radioactive/radioactively-contaminated materials is simply unacceptable for the reasons outlined above for the first alternative. To designate waste materials as radioactive in a controlled location on Day 1, and then, for economic reasons (and regardless of whether or not the materials meet an unverifiable and unenforceable dose-based standard, the overarching impetus for this practice is economics), change their designation to non-radioactive on Day 2, and allow them to leave the site without restrictions, is irresponsible. As the NRC itself concedes, any dose of radiation poses health risks to humans.

B. The NRC should be well aware at this point that there are numerous problems associated with dose-modeling and their accompanying exposure scenarios. The computer models can be manipulated such that the predicted dose from a given release or recycling practice falls within “acceptable” limits. In any case, numerous nuclear experts independent of the nuclear industry dispute such dose models as unsound science.

C. If a licensee or contractor would be involved in surveys and analyses of materials that would be inspected for potential release, conflicts of interest would be a serious problem. It would always be in a licensee’s or a contractor’s best (financial) interest to release materials.

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D. Even under the best conditions and with the most independent and objective field managers to survey and designate which materials may be released and which materials must remain contained, field conditions do not fit into tidy computer models. “Hot spots” in an enormous pile of scrap metal can be missed, for instance, and equipment can malfunction, or a need to survey materials quickly could lead to radioactive waste materials being released. In addition to errors that can occur under the best case scenario, there are also competency issues that should be considered. For instance, considering the fact that NRC and its licensee at the Millstone reactor in Connecticut were somehow capable of actually losing dangerous irradiated fuel rods – waste material that is not in dispute as highly dangerous to human health – it is worth asking how effectively the NRC can conduct or oversee a project that would require considerably more judgment and accuracy in analyzing more complex assortments of materials. In any case, the risks are too high and not justified.

E. In the event such releases were to become even more common, the more likely it would be that individuals could experience multiple exposures from radioactive waste released from NRC-licensed facilities. These multiple exposures from the release/recycling practices would not or could not be accurately measured or tracked, and the exposures would be, of course, involuntary. They are avoidable however, by the rejection of this alternative.

### Alternative 3 – Conditional Use

It appears that this is the ‘compromise’ disposition alternative being most seriously considered by the NRC at present. Upon close examination, this alternative also appears to be rather problematic:

A. It would be unacceptable to use radioactive waste materials for ANY non-nuclear uses beyond the perimeter of the restricted areas of a nuclear facility (e.g., industrial products, metal in sewer lines or bridges, concrete in construction fill, paving materials for roads, etc.). Again, the impacts from such uses would be too hard to predict based on computer models, and it is entirely unrealistic to expect these materials to never come in close contact with people, particularly those who handle the materials in construction or maintenance work, and this group does not typically have to deal with radiation hazards while working (paving crews, construction workers, etc.).

B. In limiting the usage of radioactive/radioactively-contaminated solid materials strictly to applications within the nuclear industry, where only those who are trained and expect to receive radiation exposures as part of their employment would come into contact with the materials, it would be absolutely necessary to closely track (manifest), monitor and restrict the materials such that they would remain within the nuclear industry for the entire hazardous lifetime of the particular radioisotopes on or in the material. Regulating the materials in this manner would likely be expensive also, so it is highly questionable if such a practice would be feasible or preferable compared to waste disposal in licensed disposal sites. It would not be acceptable for material to be used internally for one use, and then released without restrictions some time later. Monitoring the waste materials for a year or two is wholly inadequate when materials are contaminated with long-lived radioisotopes.

C. Considering the regulatory system and bureaucratic elements that would be needed to implement it, and the comparatively limited amounts of radioactive waste materials (compared to materials assumed to be non-contaminated within industry and recycling streams) that such a program would address, it is

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highly questionable if such a practice would even be feasible. Additionally, the risks from incompetence in application are great.

#### Alternative 4 – Disposal of Solid Materials in EPA-regulated landfills (Subtitle C or D facility)

In this alternative, radioactive waste materials would be dumped at hazardous waste facilities not designed to keep radioactive materials isolated and contained from the public (Subtitle C hazardous waste facilities), or even in general, community landfills where our curbside trash is sent (Subtitle D). Not only are such facilities likely to leak radioactive material, they also have much shorter institutional control periods, thus allowing radiation to leak soon after the required oversight of the facility is eliminated. Due to the uniquely dangerous qualities of radioactive waste, much tighter controls must be kept. We are opposed to this alternative.

#### Alternative 5 – Disposal of Solid Materials in NRC/AS LLW Disposal Sites

Of all the alternatives listed in this scoping notice, this option remains the most appropriate method for disposing of radioactive waste materials. It is the only alternative that would prevent (and stop the current) dispersal of radioactive waste into commerce and unregulated facilities.

Specifically licensed nuclear dumps are designated for radioactive waste and are, at present, the most appropriate sites for disposing of such waste. Yet, the fact that such sites are widely known to leak and thus cannot fully and completely isolate the waste from the environment and the public, indicates that much improvement is not only possible in this area, but quite necessary. The costs of disposing of radioactive waste materials at NRC/AS LLW disposal facilities should be completely internalized to the nuclear industry itself. Externalizing these costs to the public (health impacts and associated costs) and to the recycling industries is entirely unacceptable.

#### Other Issues

Thus far, we feel that the scoping process for this rulemaking has not lived up to the recommendation of the National Academies report of March 2002 to include the maximum number of stakeholders in the process, and to seriously address the concerns of those opposed to unrestricted release and recycling. Considering the far-reaching impacts and enormous public concern with such a policy, we believe it is entirely inadequate to conduct one Beltway workshop on the issue.

The potential impacts of this policy on the entire recycling industry are very troubling. Should a release and/or recycling policy be approved and implemented, there will surely be a public response. That would be to avoid products made from recycled materials. Far from being just another wonderful application of a “clean and green” recycling ethic, the current situation at NRC-licensed facilities, and the proposed rule, make a mockery of the very concept of recycling, and would jeopardize the enormous environmental gains made by the recycling industry thus far. Any alternative that would allow radioactive materials to be recycled would be harmful to the public and would put the recycling industry itself at risk. We do not feel that this has been adequately addressed, as required by NEPA.

Despite NRC’s tendency to parrot the industry’s position on this issue and be dismissive of those opposed to any and all forms of radioactive release and “recycling,” the dangers of the policy are real and will only increase if the practice expands. Further, as more is learned about the risks of low levels of radiation

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exposure (such as the “bystander effect” regarding human health risks), the more tragic it will be to discover that we can’t simply reverse course on this reckless practice and put everything back in the box.

Despite NRC’s very disappointing record in soliciting and seriously considering public input on these matters (what the National Academies report referred to as a “legacy of distrust”), we expect the issues brought up in these comments to be addressed.

Sincerely,

David Ritter  
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