



## Nuclear Information and Resource Service

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VLLW: Very Large Loophole (Low-Level) radioactive Waste

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This is our input to NRC on a “scoping study” intended to justify calling huge amounts of nuclear waste **“very low level waste”** or **VLLW** which would then be exempt from radioactive controls. We call it **“Very Large Loophole Waste.”** We oppose squandering resources to justify exempting man-made nuclear waste from radioactive controls. The industry and the public agree that massive amounts of nuclear power waste will result from decommissioning nuclear power reactors and other nuclear fuel chain facilities. Nuclear power generates large amounts of waste and the goal should be to isolate it from the public and environment to the best of our human ability in this day and age for the long time it remains radioactive. It needs to be handed down to future generations in forms and systems that isolate it from the biosphere. Exempting, dispersing, releasing it now is an irreversible decision that sentences them to random but deliberate exposures. We continue to oppose the immoral and selfish efforts to send known radioactive waste to regular garbage dumps, to industrial or hazardous waste sites, possibly into incinerators and recycling facilities to make everyday household and personal-use items (although the scoping study will consider landfills only). Huge amounts of dangerous but hard-to-detect nuclear wastes would *no longer be regulated as radioactive*. The *“alternative methods of disposal,”* not at licensed radioactive waste sites, will add to the unavoidable radioactivity and risk in the world without truly calculating the risks and costs. We ask NRC to NOT LIE. The waste is known to be radioactive so pretending it is not is untruthful.

## **NO SAFE DOSE—NO REAL LIMITS**

### **DON'T EXEMPT WASTE TO RELIEVE INDUSTRY FROM LIABILITY**

The nuclear industry wants NRC to allow *additional* radioactive doses to workers and the public. They calculate that 5 millirems a year *additional* dose to those exposed would enable 2/3 of decommissioning waste from closed nuclear power reactors to go to unregulated destinations, saving \$6 Billion dollars. A tenth of the radioactive waste from nuclear power operations could also be treated as VLLW or not radioactive and dispersed to cheaper destinations. Hazardous dumps charge a tenth as much as radioactive licensed sites and solid waste sites even less. Imagine the savings if they can sell it into recycling.

What is the cost? Five millirems/year for a 70 year lifetime would cause 1 cancer in every 2500 of us exposed. Multiply by as many waste streams as the industry wants to clear—the rule would legalize unlimited public exposures, releases and negative health impacts, without counting them in the cost/benefit analysis.

Unenforceable, unverifiable dose limits (5 millirems, 1 millirem, 10 millirems—it doesn't really matter) are a blank check to send nuclear waste out it as if not radioactive. The industry would make its own determinations, with no enforcement or verification. Fox guarding the chicken house...

Using the US Environmental Protection Agency's "Blue Book" radiation risk information, *1 in every 2500 people exposed will get cancer* from the additional 5 millirems/year lifetime dose that the Electric Power Research Institute uses in its calculations. If NRC changes the definitions of waste in this way, there could be this additional dose from every deregulated waste stream and there is no limit on the number of waste streams from the hundred plus nuclear reactors and the dozens of other nuclear power fuel chain facilities operating to enable nuclear power. Of course there is no way to verify or enforce any dose level. We, who are called "DOSE RECEPTORS," will never know what doses we get and are expected to trust computer codes developed and used by nuclear advocates to estimate our "acceptable" doses and "protect" us. If and when a VLLW category is established, it will be legal for us to be exposed above the already-unacceptable nuclear power release levels. No nuclear waste generator will be liable. Landfill operators and downstream residents, metal and other recyclers, others down the line will be exposed and if there is any liability it will fall on them, not the nuclear industry (which profits from generating the nuclear waste).

The public completely defeated many previous efforts to declare nuclear waste Below Regulatory Control, exempt, excluded, de minimus, etc. ; this is a new name for the same dangerous, deadly plan: VLLW- Very Large Loophole nuclear Waste.

VLLW nuclear power waste would be treated as if it's not radioactive; it would be disposed of or reused without radioactive regulation or control, trusting that other solid and hazardous waste regulations will protect us even though those dumps are not designed for nuclear waste and the health effects are even worse when exposures are from both radioactive and hazardous waste. Solid and hazardous waste sites all leak eventually and the long-lasting radioactive materials will leak out with the leachate or be released in the gasses.

The proposed VLLW classification is intended to open the door to routine, generic release of unlimited amounts of waste with NO public notification or opportunity to intervene or even comment.

***ENTIRE REACTORS BECOME WASTE AT DECOMMISSIONING TIME—***

***NRC MUST REQUIRE ISOLATING THAT WASTE***

The industry is promoting this now because enormous nuclear power reactors are closing. EPRI projects 84 billion cubic feet of “class A” radioactive waste and would like to release 66% of it. Entire reactors, the whole building and most of the components and parts became radioactive. They are considered nuclear waste under federal regulations (10 CFR 61.55). NRC should work on ways to isolate all of this waste rather changing the regulations to avert disposal costs at licensed disposal sites. We oppose this blatant move to relieve the nuclear power industry of liability for nuclear power waste.

Our simple message to the NRC is NO VLLW!

Keep all nuclear waste under radioactive regulatory control!

## **NIRS Responses to Questions Posed by NRC:**

1. The United States does not have a formal regulatory definition of VLLW. What should the NRC consider in developing its own regulatory definition for VLLW? Is there another definition of VLLW that should be considered? Provide a basis for your response.

***THE NRC should NOT waste its and taxpayers' resources creating a new category within the "low-level" waste category.***

***This is clearly an effort to reduce and remove radioactive regulatory controls which are already inadequate to protect the public and environment from man-made radioactive materials and wastes.***

***US NRC should be discouraging international nuclear promotion and guidance organizations (such as IAEA, ICRP, OECD, EURATOM, etc.), some in which NRC plays very influential roles, from proceeding with developing a VLLW category.***

***VLLW would disperse rather than isolate man-made radioactivity when isolating it should be the goal.***

2. The existing regulatory framework within 10 CFR 61.55 divides low-level radioactive waste into four categories: Class A, Class B, Class C, and Greater Than Class C. Should the NRC revise the waste classification system to establish a new category for VLLW?

***NO***

**What criteria should NRC consider in establishing the boundary between Class A and VLLW categories?**

***Since NRC should not be establishing a new VLLW category, there is no need to squander resources on it. Rather NRC should use its available resources to provide greater regulatory control and to track the increasing amounts of decommissioning waste.***

3. The NRC's alternative disposal request guidance entitled, "Review, Approval, and Documentation of Low-Activity Waste Disposals in Accordance with 10 CFR 20.2002 and 10 CFR 40.13(a)," which is undergoing a revision, allows for alternative disposal methods that are different from those already defined in the regulations and is most often used for burial of waste in hazardous or solid waste landfills permitted under the Resource Conservation and Recovery Act (RCRA). Should the NRC expand the existing guidance to include VLLW disposal or consider the development of a new guidance for VLLW disposal?

***NO, NO***

Why or why not?

***It is bad enough that NRC allows radioactive waste to be exempted from radioactive control on a case by case basis via 10 CFR 20.2002. Making this a generic approval, as the proposed VLLW category would do, will only make that worse and remove any opportunity for public knowledge and input by the very public that would be harmed by the re-categorization.***

4. If the NRC were to create a new waste category for VLLW in 10 CFR part 61, what potential compatibility issues related to the approval of VLLW disposal by NRC Agreement States need to be considered and addressed? How might defining VLLW affect NRC Agreement State regulatory programs in terms of additional responsibilities or resources?

***Members of the public and residents of agreement states appreciate the potential for states (whether agreement states or not) to be more protective than the federal government. NRC has various compatibility levels for its regulations. The NRC should NOT make any regulations that weaken public protection. NRC should respect state authority, and expressly permit states to retain full requirements for regulatory control that is more protective than NRC. If there is a concern about inconsistencies between states, make the standards that are most protective of the public apply to all states. If the industry convinces one or more states to reduce its radioactive controls, that should NOT be permitted in other states. Example: Tennessee's BSFR and BWAP radioactive release systems deliberately allow nuclear waste into solid waste landfills, some of which are already leaking. It is not clear how much nuclear waste is being deliberately released into commercial recycling from state-licensed facilities, but it is an abuse of public trust to release any man-made radioactive waste into commercial recycling and re-use streams of any kind including but not limited to metal, concrete, cement, soil, asphalt, plastics, wood, aluminum, oil, equipment, parts and other property, materials, buildings, building supplies, etc.***

5. Following the Low-Level Radioactive Waste Policy Amendments Act of 1985, states formed regional compacts for the disposal of low-level radioactive waste. If the NRC were to create a new waste category for VLLW, does it fall within regional compact authority to control VLLW management and disposal? How might defining VLLW affect regional compacts in terms of additional responsibilities or resources?

***Since the proposed "very low" or VLLW radioactive waste is currently part of the regulated "low-level radioactive waste stream (LLRW), states and compacts have authority over it. Even if NRC tries to redefine some LLRW as VLLW to exempt or remove radioactive controls, the states and compacts retain authority over that material. The NRC cannot and must not try to define away state authority. If NRC insists on creating the unneeded category, which is clearly to release the waste from control, state authority over it will remain. Constitutionally, changing the regulations or definitions should not affect the existing states' rights. It would be a highly objectionable power grab if NRC tried to do this.***

6. Environmental Protection Agency-imposed waste analysis requirements for facilities that generate, treat, store, and dispose of hazardous wastes are defined in 40 CFR parts 264 through 270. How would NRC incorporate and apply waste analysis requirements for VLLW at RCRA Subtitle C and D facilities? Should the NRC impose concentration limits and/or treatment standards for VLLW disposal?

***Nuclear industry efforts kept radioactive waste from being subject to RCRA when the law was being adopted. Now the industry wants to sweep massive amounts of its waste into those sites, while denying the danger of the radioactivity. The public has repeatedly opposed and stopped every known effort to allow radioactive waste into solid and hazardous waste facilities and prevented hazardous waste from going into radioactive waste facilities.***

***There is no technical justification for putting radioactive materials into solid and hazardous waste facilities...it is obvious this is only being proposed because such facilities exist and are less expensive than radioactive licensed facilities.***

***NIRS raised the issue of what to do with “low-level” radioactive waste during the licensing proceedings for nuclear power reactors and the NRC claimed then that capacity would exist when needed for radioactive regulated “low-level” waste disposal. Now, because decommissioning volumes are large, the NRC wants to allow radioactive waste to go to destinations that will not isolate it for as long as it remains radioactive. This is a clear case of externalizing the costs of nuclear power with the general public paying the cost while NRC fails to even attempt to estimate the costs to health from the dispersal and exposures. Because it is difficult and expensive to track radioactivity, NRC is taking advantage and authorizing the dispersal. NRC is clearly exempting the nuclear power industry from liability and shifting the costs to other industries, the public and the environment. It is immoral, unethical, selfish, greedy and deliberate, premeditated murder.***

7. Are there any unintended consequences associated with developing a VLLW waste category?

***Whether intentional or not, developing a VLLW category will disperse radioactive materials/wastes that should be isolated. A basic international principle of ionizing radiation protection is to prevent and minimize exposures. Spreading the waste to locations not even intended to manage or track radioactivity is irresponsible and a clear effort to externalize the costs of nuclear waste production. The consequences will be multiple, additive, cumulative and synergistic. Impacts to the health of our communities and environment include concealed, uncounted damage to future generations with birth defects and genetic mutations.***

***If the intent is to allow the nuclear industry to dump on the rest of us to save money, VLLW will achieve the goal. That is an intended consequence even if NRC and the industry deny it.***

***The precautionary principle directs that the waste should be kept under radioactive regulatory controls for at least 10-20 half lives.***

8. What analytical methods/tools should be used to assess the risk of disposing of VLLW at licensed LLW disposal facilities or RCRA Subtitle C and D facilities? (*i.e.*, generic or site-specific)

***We oppose any pseudo-scientific analysis, assessment or rationalization for dispersing man-made radioactivity from radioactive regulatory control.***

9. How should economic factors be considered in the VLLW Scoping Study?

***Until the NRC admits that there are health effects from low continuous doses of radiation, the Commission is incapable of assessing the true economic consequences (including health effects) of the widespread releases and exposures that creating a VLLW category would cause. Health effects are inevitable but not tracked. The costs to society and individuals are completely ignored and denied by NRC and the industry. It is unacceptable that absolutely no effort is made to estimate the costs in disease and suffering caused by the deliberate dispersal of man-made nuclear power waste.***