

Rulemaking Comments

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OFFICE OF SECRETARY
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Secretary

U.S. Nuclear Regulatory Commission

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On June 10, 2011, the NRC published in the Federal Register the latest notice concerning development of regulations for future facilities engaged in the reprocessing of spent, or irradiated nuclear fuel. This comment is in response to that notice and is being submitted for the record.

The order of these comments does not indicate priority:

- We oppose the development of regulations for reprocessing plants as there is no need to develop regulations for facilities that will not be pursued. We support a decision by the Commission to not proceed to rulemaking for regulations that are not needed and for which no urgency has been established. This process can thus be terminated when the staff concludes its work in September. The recommendations by the Blue Ribbon Commission are likely to affirm that reprocessing is, at best, decades away, underscoring the lack of necessity to finish promulgation of regulations which will not be used and which will soon be outdated.

- Development of a single set of regulations to cover all aspects of reprocessing complex appear at this point beyond the capacity of the regulatory structure and the capability of the NRC to manage. Given the host of functions which could take place at a reprocessing complex – including spent fuel storage in dry casks and in pools, reprocessing, waste management and disposal, noble gas capture and containment, materials storage, and fuel fabrication – a single set of new regulations will be both insufficient to cover all possible functions and processes. Many existing regulations may not need changing in spite of efforts to neatly roll them into a single regulatory framework.

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- We oppose consideration of a one-step licensing process for reprocessing plants as this approach not only would be applied to speculative and untested reprocessing and associated technologies but also would reduce public opportunity for involvement in the licensing process.
- Reprocessing leads to a myriad of hard-to-manage radioactive waste streams, including high-level waste, Greater-than-Class-C waste, low-level waste, noble gases, contaminated uranium, and weapons-usable plutonium. These waste streams are more difficult to manage and isolate from the biosphere than the original irradiated fuel and create a greater volume with no reduction in radioactivity. We support containment and isolation of radioactivity from the environment but reprocessing achieves the opposite result, with a higher economic cost than managing spent fuel via Hardened On-Site Storage (HOSS).
- Reprocessing cannot be defined as recycling. Given the waste streams generated via reprocessing which have no potential use whatsoever it is incorrect and misleading to call it recycling. Any draft definitions by the NRC must reflect reality and not a greenwashing term favored by some in the nuclear industry.
- The NRC must take note that reprocessing in the United Kingdom has been an abysmal failure, that Russia continues reprocessing with no use of separated plutonium, that all European countries have now withdrawn from reprocessing in France and that France reuses little of the contaminated uranium removed via reprocessing, and that the \$20 billion Japanese reprocessing plant Rokkasho has failed to start after more than two years of attempts. The disastrous U.S. experience with commercial reprocessing at West Valley, New York from 1966-1972 was a total failure which contaminated the environment and resulted in a multi-billion dollar clean-up program that is still proceeding, revealing that the NRC must guarantee that all costs of operation, clean-up and potential accidents must be guaranteed by license holders.
- The NRC states that it does not "set national policy" however by writing a reprocessing rule at this time, the NRC would greatly influence national policy on plutonium. The U.S. has, in the past, under Presidents Ford and Carter, forestalled separation of plutonium from civilian radioactive waste. Development of regulations simply in response to companies claiming that they will apply for a license for a reprocessing facility is not adequate basis to continue this effort. The NRC's writing new rules for plutonium separation in the near term would be "playing into the hand" of those who do seek to set national policy including foreign interests (AREVA and the French government of which it is an arm) who would benefit economically, while placing greater liability on the US taxpayer and electric power customers in the USA. While U.S. law and U.S. regulations clearly forbid a license for a foreign owned or controlled operation, these interests must also be prevented from dictating U.S. policy -- through an agency the publicly states that it does NOT set policy.
- Plutonium fuel or Mixed Oxide Fuel -- the product of commercial reprocessing -- is much more dangerous, harder to control in a reactor than uranium fuel and twice as deadly compared to uranium in case of a major reactor accident. The increased hazard is because there is both more plutonium in the reactor core, and also

more of the heavier-than-plutonium elements -- all of which are more toxic and more carcinogenic than what has caused enormous suffering in the areas impacted by Chernobyl, and likely Fukushima. There is no established national policy to use plutonium fuel on a wide-spread commercial basis and the Department of Energy's MOX program is facing many hurdles as no reactors have been identified to use the fuel and DOE has refused to reveal the decade-long testing program that will be needed to test MOX in reactors owned by the Tennessee Valley Authority.

- It is incumbent upon the NRC to do a full-scale analysis under the National Environmental Policy Act (NEPA) - a Programmatic Environmental Impact Statement - from "cradle to grave" BEFORE embarking on a rulemaking. The overall consequences of reprocessing and associated facilities and processes as it relates to the entire nuclear fuel cycle must be analyzed first. Likewise, as the pursuit of reprocessing regulations could stimulate interest in a questionable technology, the NRC must take a "hard look" at the consequences of encouraging reprocessing/separation of plutonium in the U.S. The NEPA analysis should be programmatic and examine all aspects of this activity -- including implications for the taxpayer, the ratepayer, waste management, the environmental impacts at every step and the international ramifications on the global fuel cycle as well. The overall issue of international proliferation of nuclear weapons materials is appropriate to include in the full public debate and should be included in this analysis.

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