

December 6, 2017

Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001  
Attention: Rulemakings and Adjudications Staff  
*Via comments@nrc.gov*

RE: *Docket No. NRC-2017-0159* (public comments of Nuclear Information and Resource Service, Food & Water Watch, and Toledo Coalition for Safe Energy)

Dear NRC Secretary:

Nuclear Information and Resource Service (NIRS) and the Toledo Coalition for Safe Energy hereby make the following comments as part of the rulemaking docket in the captioned matter.

The Energy Policy Act of 2005 ("EPA2005") expanded the Atomic Energy Act definition of "byproduct material" enabling the Nuclear Regulatory Commission (NRC) and Agreement States to regulate naturally occurring and accelerator produced radioactive materials and waste. The change was motivated by the urgent need for Radium-226 to be regulated. The new 11(e) 3 and 4 categories of byproduct material include naturally-occurring and accelerator produced radioactive material (NORM and NARM-isotopes created via particle accelerator for commercial, medical or research use).<sup>1</sup> Specifically, EPA2005 buttressed the practice of disposal of byproduct material "in a disposal facility that --

(A) is adequate to protect public health and safety; and

(B)(i) is licensed by the Commission; or (ii) is licensed by a State that has entered into an agreement with the Commission under section 2021(b) of this title, if the licensing requirements of the State are compatible with the licensing requirements of the Commission."<sup>2</sup>

We call on NRC to exercise regulatory control over the new categories of byproduct material, rather than exempt them from regulatory control under the AEA.<sup>3</sup> We certainly have sympathy that medical facilities with limited resources need to have reasonable requirements commensurate with the radiological hazard of the isotopes they create and use. We support that portion of the petition for rulemaking but oppose the generic exemptions that could result for other licensees and other radioisotopes. Our concern is that this petition could legalize and serve as a precedent for more generic release and exemption from radioactive regulatory control of many more industrial radioisotopes under the guise of one with a medical purpose. We support state authority to set stricter more protective standards for public protection, encourage states to

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<sup>1</sup>42 U.S.C. § 2014(e)( C)(3)(A); 42 U.S.C. § 2014(e)( C)(3)(B).

<sup>2</sup>42 U.S.C. § 2111(b)(1)(A) and (B).

<sup>3</sup>42 U.S.C. § 2111( c).

exercise their authority to be more protective, call on NRC to require full regulatory control/ no generic exemptions and to set the adequacy and compatibility levels to allow greater protection by states. While the example in the petition for rulemaking is for a set of medical isotopes to prevent decommissioning plans and costs, NRC should be up front about how oil and gas including fracking wastes and other industrial, commercial radioactive isotopes could be exempted unduly giving the misperception that those activities are less costly than they really are if the public is protected from unnecessary exposures from their wastes. Exempting radionuclides as proposed in the petition significantly relieves generators from cleanup and disposal costs creating an externality borne by the public. License radioactive disposal in a federal or Agreement State licensed facility and full cleanup at the time of license termination should be part of the cost of doing business.

A review of the comments filed in the docket of this rulemaking to date suggests that there is some support for raising of threshold quantities of byproduct material so as to reduce liability expense and to generally ease restrictions on disposal. Some comments disclose the established practice of simply returning byproduct material and generation equipment to the manufacturer, which appears to provide a relatively inexpensive and organized means of tracking and disposal (and likely the waste concentrates quantities of irradiated material and in turn inspires a more identifiable disposal chain of documentation). It is incumbent on NRC to consider the perspective of the members of the public in this and future generations who do not consent to additional unnecessary exposure to radionuclides, the likelihood of multiple exposures and the significantly higher negative impact on females and the young in our population.

Famously included in the EPA2005 was the Halliburton Loophole, which exempted injections for the purpose of horizontal hydraulic fracturing, or “fracking.” from regulation under the EPA’s Underground Injection Control program. Contemporaneous to the passage of EPA2005, fracking for extraction of oil and gas was about to spike across the country. Fracking creates enormous volumes of liquid and solid wastes laden with dangerous industrial chemicals, but also containing Ra-226, Th-232, several Uranium isotopes, and other NORM elements. Although fracking wastes may fall outside the AEA, the enormous liquid and solid volumes generated have forced several states to attempt to regulate but also to deregulate radioactive material (somewhat analogous to NARM) and allow its disposal in regular “Part C” sanitary landfills.

Agreement state radiological management agencies also oversee fracking waste disposal and it is obvious that byproduct material, as well as fracking wastes, both can be handled, transferred, *etc.* and that a “use” of byproduct material for “commercial” purposes could include “owning” Ra-226-contaminated material for purposes of “commercial” landfilling. Recourse to sanitary landfills is a state agency-approved activity (in some states) for byproduct material dumping, and there are far more such deregulated dumping options owing to the change in the oil and gas industry to fracking extraction. Hence it is probable that the *de facto* deregulatory step of raising the permissible threshold amounts of commercial, research and medical byproduct material will create volumes of byproduct industrial wastes that are exempt from decommissioning plan requirements.

The proliferation of inexpensive sanitary landfill disposal options for byproduct (radioactive) material could become a new deregulated waste stream. In Ohio, for example, there is no requirement for portal radiation monitoring equipment at solid waste facilities to be used to identify the radiological contents of material being dumped and the monitoring equipment in use is largely ineffectual in identifying alpha or beta radiation. Many of the 10 C.F.R. Part 30, Apdx. B isotopes are alpha emitters.

The cost of radioactive waste disposal in an Ohio sanitary landfill is less than 2% the cost of disposal of byproduct material in NRC or Agreement State-regulated facilities such as is found in west Texas, Belleville, Michigan or Utah. Changing the amount of material covered by decommissioning plan requirements simultaneously would reduce the tracking of AEA-regulated wastes, even as it also increased the amount of radioisotopes being hauled around the country to, and disposed within, sanitary landfills.

Along with the increased likelihood of conventional landfills for byproduct radioactive waste disposal comes the potential for chemical interaction and concentration of the radioactive products being dumped in the landfills. In states such as Ohio, where radioactive fracking wastes are not required to be segregated from other wastes, nor identified via GPS coordinates when dumping occurs, there are troubling environmental implications. The random and unanticipated concentration and interaction of isotopes is left unexamined by the envisioned accommodations to private-sector byproduct material users. The polluting effects of the addition to the radioactive waste stream going into sanitary landfills might be significantly altered for the worse. Oversight of post-closure remediation efforts at landfill sites will be greatly complicated by the addition to the waste stream of deregulated commercial, research and medical byproduct material.

We now address questions 3 and 4 postulated by the NRC in its rulemaking solicitation.

**3. Given NRC's current regulatory authority over the radiological safety and security of NARM, what factors should the NRC take into account in establishing possession limits for any of these materials that should be listed 598//8 in appendix B of 10 CFR part 30?**

We raise salient environmental concerns above. Prior to any modification of byproduct material possession limits, it is imperative that a Programmatic Environmental Impact Statement be undertaken for what are indisputably “broad Federal actions.” 40 C.F.R. § 1502.4(b). “Programmatic NEPA reviews address the general environmental issues relating to broad decisions, such as those establishing policies, plans, programs, or suite of projects, and can effectively frame the scope of subsequent site- and project-specific Federal actions.” CEQ, Effective Use of Programmatic NEPA Reviews, pp. 9-10 (2014).<sup>4</sup> “A well-crafted programmatic

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<sup>4</sup>[http://www.whitehouse.gov/sites/default/files/docs/effective\\_use\\_of\\_programmatic\\_nepa\\_reviews\\_final\\_dec2014\\_searchable.pdf](http://www.whitehouse.gov/sites/default/files/docs/effective_use_of_programmatic_nepa_reviews_final_dec2014_searchable.pdf)

NEPA review provides the basis for decisions to approve such broad or high-level decisions such as identifying geographically bounded areas within which future proposed activities can be taken or identifying broad mitigation and conservation measures that can be applied to subsequently tiered reviews.” *Id.* Additionally:

Programmatic NEPA reviews provide an opportunity for agencies to incorporate comprehensive mitigation planning, best management practices, and standard operating procedures, as well as monitoring strategies into the Federal policymaking process at a broad or strategic level. These analyses can promote sustainability and allow Federal agencies to advance the nation’s environmental policy as articulated in Section 101 of NEPA.

By identifying potential adverse impacts early during the broad programmatic planning, programmatic NEPA reviews provide an opportunity to modify aspects of the proposal and subsequent tiered proposals to avoid or otherwise mitigate those impacts. A thoughtful and broad-based approach to planning for future development can include best management practices, standard operating procedures, adaptive management practices, and comprehensive mitigation measures that address impacts on a broad programmatic scale (e.g., program-, region-, or nationwide).

*Id.* at 35.

Case law supports the preparation of a programmatic EIS here. In *Kleppe v. Sierra Club*, the Supreme Court recognized that NEPA may mandate a comprehensive EIS “in certain situations where several proposed actions are pending at the same time.” *Kleppe*, 427 U.S. 390, 409 (1976). The Court noted that “when several proposals . . . that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental impacts must be considered together. Only through comprehensive consideration of pending proposals can the agency evaluate different courses of action.” *Id.* at 410.

A two-pronged inquiry establishes whether a programmatic EIS is appropriate. First, could the programmatic EIS be sufficiently forward-looking to contribute to the decisionmakers’ basic planning of the overall program? and, (b) Does the decisionmaker purport to “segment” the overall program, thereby unreasonably constricting the scope of primordial environmental evaluation?” *Churchill County v. Norton*, 276 F.3d 1060, 1076 (9<sup>th</sup> Cir. 2001) (citing *Nat'l Wildlife Fed'n v. Appalachian Reg'l Comm'n*, 677 F.2d 883, 889 (D.C. Cir. 1981)). See also *Foundation on Economic Trends v. Heckler*, 756 F.2d 143, 159 (D.C. Cir. 1985).

We believe the answers to both of the latter questions are “yes.”

**4. Does this petition raise other issues not addressed by the questions above about labeling or decommissioning financial assurance for radioactive materials? Must these issues be addressed by a rulemaking, or are there other regulatory solutions that NRC should consider?**

The commenters are not particularly opposed to addressing these issues via rulemaking, but we object if discussions of decommissioning financial assurance and associated economic and financial effects are not addressed within a NEPA document.

In sum, we believe that before changes in regulations should be implemented via rulemaking that NEPA must be followed, possibly in the form of compilation of a Programmatic Environmental Impact Statement. We call on NRC to respect state authority for greater protection and to protect the public in this and future generations from bearing the external health, economic and environmental costs of deregulating or legalizing clearance of all categories byproduct material.

Thank you.

Sincerely,

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**Date:** Wednesday, December 06, 2017 11:47:23 PM  
**Attachments:** [NIRS TCSE FWW comments on Docket No NRC-2017-0159.pdf](#)

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TO: NRC DOCKET 2017-0159, Naturally-Occurring and Accelerator-Produced Radioactive Materials

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DATE: December 6, 2017

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