

March 8, 2011

DOCKETED  
USNRC

Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
ATTN: Rulemakings and Adjudications Staff  
Re: Docket ID NRC-2010-0372

March 9, 2011 (7:50 am)

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

**Union of Concerned Scientists' Comments on Petition for Rulemaking PRM 70-9**

The Union of Concerned Scientists (UCS) strongly endorses the need for the Nuclear Regulatory Commission (NRC) to conduct rigorous reviews of proliferation impacts during the licensing of fuel cycle facilities that produce, possess or use special nuclear materials (SNM). A regulatory requirement for a Nuclear Proliferation Assessment (NPA) would address a major gap in the current domestic licensing framework, which restricts consideration of proliferation issues to the narrow questions of whether or not a facility meets NRC regulations for material protection, control and accounting, and protection of sensitive information. Such a limited review does not take into account broader issues related to the indirect impacts of NRC licensing of sensitive fuel cycle facilities on the global nonproliferation regime. NRC's tunnel vision should be contrasted with the Department of Energy, which has conducted several nonproliferation impacts assessments in the context of major proposed actions involving domestic processing of SNM. Consequently, UCS supports the petition for rulemaking PRM 70-9, subject to the following caveats.

1. The Nuclear Proliferation Assessment should address the global impacts on both nation-state proliferation and sub-national theft and diversion; consequently, a better title for the assessment may be a Nuclear Proliferation and Terrorism Assessment (NPTA).
2. The requirement for the NPTA should apply to license applications for all fuel cycle facilities seeking to produce, possess and/or use special nuclear material under Parts 50 and 70, including mixed oxide fuel fabrication facilities and uranium conversion plants. The intensity of the review could be graded in accordance with the sensitivity of the facility.
3. In addition to the technical considerations listed in the petition, the NPTA should take a broader view, and analyze the potential global policy impacts associated with NRC licensing of sensitive fuel cycle facilities. A good example of such a review is the Department of Energy's 1999 "Nonproliferation Impacts Assessment for the Treatment and Management of Sodium-Bonded Spent Nuclear Fuel." This document considered three technical factors and four policy factors associated with a proposal to use a U.S. facility to chemically treat a stockpile of U.S. spent nuclear fuel. The technical factors

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include an evaluation to assess “the attractiveness and accessibility of the material to potential overt or covert theft or diversion with respect to its characteristics both during and after processing” and the degree to which a particular technology would “facility cost-effective international monitoring.” The policy considerations include an evaluation of the degree to which a particular technology would “avoid encouraging other countries to engage [in] spent nuclear fuel reprocessing, or undermining U.S. efforts to limit the spread of reprocessing technology and activities, particularly to regions of proliferation concern,” and would “support negotiation of a nondiscriminatory global fissile material cutoff treaty (FMCT), including allowing for the possibility of verification approaches that would be acceptable to the United States.”

4. The NPTA should evaluate “beyond-design-basis” proliferation and terrorism impacts. That is, it should consider diversion and theft scenarios by adversaries with capabilities exceeding the design basis threats for theft or diversion of SNM. This would make the assessment comparable to the aircraft impact assessment (AIA) required for new nuclear plant applications in 10 CFR §50.150.
5. Also in parallel with 10 CFR §50.150, the NPTA should require applicants to consider additional design features that would help to mitigate diversion and theft risks and allow reduced reliance on operator actions to meet security and nonproliferation objectives. This would be consistent with the growing consensus in the nuclear materials management community of the fundamental importance of “safeguards by design.”

Sincerely,

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## Rulemaking Comments

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**From:** Edwin Lyman [ELyman@ucsusa.org]  
**Sent:** Tuesday, March 08, 2011 7:34 PM  
**To:** Rulemaking Comments  
**Subject:** Re: Docket ID NRC-2010-0372  
**Attachments:** UCS comments - aps petition.pdf

Please find attached the comments of the Union of Concerned Scientists on the petition for rulemaking Docket No. PRM-70-9; NRC-2010-0372.

Sincerely,

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