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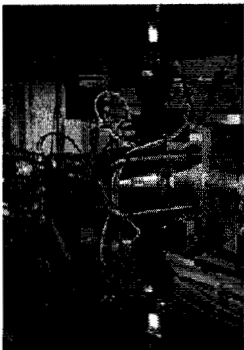
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U.S. Agency Rejects Petition on Proliferation Reviews, But Tweaks Process

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By Elaine M. Grossman

Global Security Newswire



Laser isotope separation equipment. The U.S. Nuclear Regulatory Commission last week rejected a bid to require license applicants for new nuclear fuelling processes, such as laser enrichment, to perform proliferation assessments (Lawrence Livermore National Laboratory photo).

WASHINGTON -- The U.S. Nuclear Regulatory Commission has denied a formal petition to require license applicants for new atomic fuel-making facilities to conduct appraisals of the technology's potential for global proliferation.

Inside the government paperwork documenting the Friday decision, though, was buried a nod to concerns about the spread of sensitive nuclear materials raised by the rejected petition, which was submitted in 2010 by a 114-year-old physicists' organization.

Despite nixing the American Physical Society proposal, NRC commissioners directed staff to offer future industry applicants a list of "considerations" they could "use in the design phase" to help prevent illicit efforts.

The central question here was whether U.S. licensing for new technologies to enrich uranium or reprocess plutonium might heighten the proliferation risk of nuclear weapons. These processes can be used to make fuel for nuclear reactors but also hold the potential for diversion to a clandestine program to build atomic weapons.

As Exhibit A, nonproliferation proponents cite the NRC approval last September of a first-ever U.S. plant that would use lasers to enrich uranium, which industry giant GE-Hitachi proposes to build in North Carolina.

The precedent could spur covert nuclear-arsenal wanna-bes worldwide to similarly research lasers and miniaturize fuel production, issue experts argue. Smaller secret facilities might be even harder to detect than today's undeclared centrifuge plants.

Still, the nuclear agency responded last week that requiring license applicants to perform proliferation appraisals would not "provide the NRC with meaningful information that would enhance the NRC's decision-making."

The nuclear energy industry has not demonstrated "a particular insight on proliferation issues or ... access to the intelligence resources, capabilities, and information that would enable them to prepare a meaningful proliferation assessment," according to the agency.

In its rationale for denial, the Nuclear Regulatory Commission "acknowledges that new technologies may pose proliferation risks." However, it said the domestic licensing and regulatory process is not the central forum for addressing those dangers, and pointed to the State and Energy departments as taking the federal lead.

"The accurate assessment and deterrence of global proliferation risk requires examination of numerous variables, largely in international and military arenas that are far afield from the NRC's core domestic licensing and oversight activities," according to the decision.

"To the extent that the petitioner is concerned about generating greater foreign interest in new ENR technologies and/or a spread of sensitive technology to countries of proliferation concern, the president and the Congress have the primary responsibility for developing and promoting the federal government's national nuclear nonproliferation goals and policies," the NRC decision reads.

At the same time, the agency insisted in a May 31 letter to Francis Slakey -- who filed the petition on behalf of the physicists' association -- that its own application-review processes are sufficient.

"The NRC's comprehensive licensing framework" -- to include "extensive" regulations, "ongoing oversight," and "active interagency cooperation" -- "adequately addresses proliferation risks and concerns associated with the construction and operation of an [enrichment or reprocessing] facility in the United States," said Annette Vietti-Cook, secretary of the commission.

Slakey called the NRC decision "unfortunate."

"They speak with two voices," he told *Global Security Newswire* on Friday. "They say they have the capability in place to assess proliferation risks and they say it's someone else's responsibility. It can't be both."

Nonetheless, commissioners agreed the agency could take some limited new actions to underscore nonproliferation objectives.

"The petition provided some 'key questions that indicate the degree of proliferation risk,' such as the detectability and design of the facility," that "may be good areas of licensee focus to complement the NRC's requirements" to ensure public health, safety and security, according to an internal staff directive approved by all five NRC commissioners.

The panel members reviewed the physicists' entreaty and issued their votes and comments in writing over the past several months, rather than meet to debate the issue in person.

The first commissioner to weigh in on the matter was William Ostendorff, who moved on Dec. 20 to jettison the petition's request for industry proliferation assessments as part of licensing.

His draft text for providing industry applicants with proliferation-resisting considerations they could implement early in the facility design phase was also ultimately embraced by all the NRC leaders.

The physicists' petition cited these questions as possible considerations:

-- "Could the design of the technology be altered easily to allow for-diversion of nuclear material?

-- "Could the facility be constructed and operated in a manner that is undetectable?

-- "Are there unique components of the technology whose acquisition would indicate the construction of such a facility and could be easily tracked?"

Additionally, the May 22 NRC directive reads, "the staff should periodically review our regulations and guidance to ensure that our requirements are robust enough to meet new proliferation challenges involved in building and operating enrichment or reprocessing facilities that use technologies the NRC has not previously licensed."

The NRC commissioners' vote to reject the heart of the scientists' 2-year-old petition for a rulemaking change was unanimous. Chairwoman Allison Macfarlane and Commissioner William Magwood joined in that ruling but also partially dissented from the agency staff's recommendation for denial.

"NRC needs to develop a more comprehensive approach to assessing the proliferation risks posed by technologies that we are asked to license," Macfarlane said in March 22 written comments that were not embraced by a majority of panel members.

The American Physical Society had argued in its petition that performing nuclear proliferation assessments would be consistent with the NRC responsibility by law for evaluating whether issuing a particular license "would be inimical to the common defense and security or to the health and safety of the public."

This view drew wide support from issue experts, some leading lawmakers and a Congressional Research Service advisory, while an industry advocacy group argued in opposition.

Macfarlane joined the rest of the commission in rebuffing the physicists' view "that our current licensing process is broken or deficient."

However, the NRC chairwoman said she and Magwood did agree it is not enough for the agency to continue to rely on the "net effect" of various aspects of the licensing application to help prevent proliferation.

"We should consider the benefits of a cumulative assessment," which would more effectively synthesize the review of public health, safety and security implications of each license application for nuclear fuel production, Macfarlane said.

This is an approach the agency already takes in environmental reviews, she noted, in which "individual impacts may be minor when considered alone, but are potentially more significant when viewed together with the potential impacts of other reasonably foreseeable actions over a period of time."

However, as a minority view, this recommendation was not incorporated into the final NRC decision or staff directive.

Arguing that its existing processes already fulfill the agency's nonproliferation responsibilities, the NRC staff noted its handling of the recent laser enrichment license approval as an example.

"The NRC is not aware of any [enrichment or reprocessing] technologies that cannot be detected or pose proliferation risks that are not addressed by the NRC's existing licensing framework," according to the agency. "Similarly, the NRC is not aware of, and the petition did not identify, any new technologies that would be 'game changers' because they would be less expensive, too small, or too efficient to detect."

The regulatory officials signaled, though, that they intend to remain vigilant.

"If a future technology presents proliferation risks that are not addressed by the current framework, the NRC will act appropriately to protect the public health and safety and promote the common defense and security," they said.

Issue experts worry that once the U.S. industry proves the laser enrichment process can be successfully commercialized, proliferators will attempt to duplicate these successes abroad for illicit uses.

The federal nuclear agency said, though, it "does not agree" this would be the effect of a licensing decision in Washington.

"Many other factors would play a role in a particular government's pursuit of [enrichment or reprocessing] technology, including its political will, technical expertise, financial capital, and international obligations," the decision states.

In any case, the agency said, "speculative assertions regarding the potential influence of NRC decisions are not considered in domestic licensing proceedings."

Slakey, associate public affairs director at the American Physical Society, said he anticipates this will not be the last word on the matter.

"I know there's some action in Congress and that should be an effective tool," he said.

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