Congressional Research Service

MEMORANDUM March 27, 2012

To: Hon. Jeff Fortenberry

From: Todd Garvey, Legislative Attorney 7-0174

Subject: **Authority of the Nuclear Regulatory Commission to Require a Proliferation Risk Assessment as Part of a Uranium Enrichment Facility License Application**

This memorandum responds to your request for information relating to the Nuclear Regulatory Commission's authority to prescribe the necessary contents of certain license applications. Specifically, you asked whether the Nuclear Regulatory Commission (Commission) has existing authority to require that applicants seeking a license to operate a uranium enrichment facility[1] submit a "proliferation risk assessment"[2] as part of the license application. Given that the Atomic Energy Act (AEA) provides the Commission with broad authority to promulgate mandatory licensing criteria for the use of nuclear materials and the operation of nuclear facilities—where such criteria has a nexus to the common defense, health, or safety— it would appear that adequate statutory authority currently exists to permit the Commission to mandate, by regulation, that applicants seeking a license to operate a uranium enrichment facility provide the Commission with an assessment detailing the proliferation risks associated with the facility.

The Solar, Wind, Waste, and Geothermal Power Production Incentives Act (Power Production Act) amended the AEA to provide that privately owned,[3] domestic uranium enrichment facilities shall be licensed under section 42 U.S.C. § 2073, pertaining to the distribution of "source material," and 42 U.S.C. § 2093, pertaining to the distribution of "special nuclear material."[4] The Power Production Act also directed the Commission to "conduct a single adjudicatory hearing on the record with regard to the

[1] The Commission defines a uranium enrichment facility as "any facility used for separating the isotopes or uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only…" 10 C.F.R. 70.4.

[2] Although CRS has not been provided with a proposal for what such an assessment would entail, for the purposes of this memorandum, such an assessment would presumably include an analysis of the potential for the disclosure or diversion of sensitive uranium enrichment technology or the spread of dangerous nuclear material as a result of the licensing and operation of the specific facility.

[3] Prior to the privatization of uranium enrichment operations in the 1990's, the federal government produced enriched uranium for use in nuclear power plants.

[4] P.L. 101-575 §5, 101st Cong. (1990), 42 U.S.C. § 2243. "Source material" includes "(1) Uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of: (i) Uranium, (ii) thorium or (iii) any combination thereof. Source material does not include special nuclear material." 10 C.F.R. § 40.4. "Special nuclear material" includes "(1) plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material." 10 C.F.R. § 70.4.

licensing of the construction and operation of a uranium enrichment facility."[5] Accordingly, under the AEA and its implementing regulations, licensing of uranium enrichment facilities occurs through a "single step licensing process" in which the facility must obtain a special nuclear material license and a source material license pursuant to § 2073 and § 2093.[6]

The application procedures for obtaining a license under 42 U.S.C. § 2073 and 42 U.S.C. § 2093 are detailed in 10 C.F.R. Parts 40 and 70. The Commission has relied on various sources of existing statutory authority to implement these licensing provisions and to establish the required contents of a license application.[7] For example, the Commission is expressly authorized to "establish, by rule, minimum criteria for the issuance of specific or general licenses" for the distribution of both source material and special nuclear material.[8] The Commission is also granted broad authority to:

> establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material and byproduct material as the Commission may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property; in addition, the Commission shall prescribe such regulations or orders as may be necessary or desirable to promote the Nation's common defense and security with regard to control, ownership, or possession of any equipment or device…capable of separating the isotopes or uranium or enriching uranium in the isotope 235.[9]

Additionally, 42 U.S.C. § 2232 provides that "each application for a license…shall specifically state such information as the Commission, by rule or regulation, may determine to be necessary to decide such of the technical and financial qualifications of the applicant…or any other qualifications of the applicant as the Commission may deem appropriate for the license."[10] Finally, the Commission has the general authority to "make, promulgate, issue, rescind, and amend such rules and regulations as may be necessary to carry our the purposes of [the AEA]."[11]

Pursuant to these authorities, the Commission has promulgated extensive regulations prescribing the information that must be provided to the Commission by applicants seeking to operate a uranium enrichment facility.[12] For example, information that must be submitted in order to obtain a license to possess and use special nuclear material currently includes, but is not limited to: personal contact information and references; descriptions of the amount of nuclear material involved and the purpose and duration for which the applicant seeks to use the material; the technical qualifications of the applicant to operate the facility; a description of the equipment and facilities to be used; proposed procedures to protect health and minimize danger to life and property; proposed sources of decommissioning funding;

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[5] In addition, the Power Production Act made the issuance of any license for a uranium enrichment facility a "major federal action" subject to the requirements of the National Environmental Policy Act. 42 U.S.C. § 2243(a).

[6] Uranium Enrichment Regulations, 57 Fed. Reg. 18388 (Apr. 30, 1992).

[7] For the Commission's statement of authorities see, 10 C.F.R. Parts 40 and 70.

[8] 42 U.S.C. §§ 2073, 2093. Both provisions direct the Commission to establish minimum criteria for the issuance of licenses "depending upon the degree of importance to the common defense and security or to the health and safety of the public of—(1) the physical characteristics of the [source or special nuclear material] to be distributed; (2) the quantities of [source or special nuclear material] to be distributed; and (3) the intended use of the [source or special nuclear material] to be distributed."

[9] 42 U.S.C. § 2201(b).

[10] 42 U.S.C. § 2232. This section also provides that "[t]he Commission may at any time after the filing of the original application, and before the expiration of the license, require further written statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked,"

[11] 42 U.S.C. § 2201(p).

[12] *See, e.g.,* 10 C.F.R. §70.22; 10 C.F.R. § 40.31. Applications for license renewals are subject to these same application requirements. *See*, 10 C.F.R. §§ 40.43, 70.33.

provisions for liability insurance; a safety assessment; and a physical security plan, emergency plan, and threat and safeguards contingency plan.[13]

Although much of the required contents of a license application appear to be based on the Commission's obligation to ensure health and safety, the Commission is also expressly authorized to issue licensing rules and regulations for the purpose of promoting the "common defense and security…"[14] The Commission has already promulgated numerous license application requirements under Part 70 that appear to be associated with security, including submission of: a plan for the physical protection of special nuclear material during transport; a physical security plan that satisfies the physical protection requirements of 10 C.F.R. Part 73; a safeguard contingency plan protecting against "threats, thefts, and radiological sabotage;" and a general requirement to protect Safeguards Information and other classified information.[15] Given this statutory environment, it would appear that the Commission could reasonably conclude that it has existing authority to require, by rule or regulation, that applicants submit specific information that the Commission deems "necessary or desirable" to promote "the common defense or security." A requirement that an applicant submit an assessment that details the technological and material proliferation risks associated with a facility, in addition to the steps the applicant has taken, and will take, to combat unauthorized disclosure of technological and material information, could be characterized by the Commission as a measure designed to promote "the common defense and security."[16] Such an addition to the required contents of a license application would, therefore, appear to be within the Commission's existing authority.

Moreover, 42 U.S.C. § 2077 expressly states that the Commission shall not "issue a license pursuant to section 2073 of this title to any person within the United States if the Commission finds that the…issuance of such license would be inimical to the common defense and security or would constitute an unreasonable risk to the health and safety of the public."[17] Accordingly, the Commission could find a proliferation assessment to be essential in determining whether the issuance of a specific license would be "inimical to the common defense and security."[18] Requiring evidence that an applicant can adequately

[13] 10 CFR § 70.22. The legal authority for most of these additions appears to be 42 U.S.C. § 2201 and 42 U.S.C. § 2073.

[14] 42 U.S.C. §§ 2073, 2093, 2201. *See*, 10 C.F.R. § 70.4 ("*Common defense and security* means the common defense and security of the United States"). One of Congress's enumerated purposes in enacting the AEA was to "encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public…"

[15] 10 C.F.R. § 70.22(g)-(m). The Commission has also implemented various regulations for the purpose of safeguarding national security information and restricted data. See, 10 C.F.R. Part 95.

[16] Although the Commission has previously determined that non-proliferation issues do not fall within the scope of an environmental analysis under the National Environmental Policy Act, it appears that the Commission has yet to formally determine whether non-proliferation issues fall within the scope of the Commission's broad authority under the AEA. *See, e.g.,* Memorandum and Order, In the Matter of Louisiana Energy Services, L.P., Docket No. 70-3103-ML (Nov. 21, 2005) ("Nuclear non-proliferation concerns span a host of factors far removed from the licensing action at issue. Any potential effects of the [] facility on non-proliferation policies and programs are speculative, and far afield from our decision whether to license the facility, given that achieving non-proliferation goals depends on independent future actions by numerous third parties, including the President, Congress, and officials of other nations…The nation's non-proliferation objectives are international in nature and do not have a 'proximate cause' connection to the proposed [] uranium enrichment facility sufficient to require a NEPA inquiry.") Commission Chairman Gregory Jaczko has reportedly said that evaluating possible proliferation risks "is certainly well within our authority as regulator." Elaine M. Grossman, *Agency Forgoes Proliferation Review of New Nuclear Technology, Despite Worries*, Global Security Newswire (July 30, 2010).

[17] 42 U.S.C. § 2077.

[18] Although the AEA does not *require* the Commission to mandate the submission of a proliferation risk assessment, it should be noted that if the Commission determined that requiring a proliferation risk assessment was within the Commission's existing authority to promote the "common defense and security" and subsequently implemented such a requirement through rulemaking, if that rule were then challenged, a reviewing court would likely accord the Commission's interpretation of its own authorizing (continued...)

protect uranium enrichment technology by requiring the submission of a proliferation risk assessment would appear to be one method by which the Commission could ensure that issuance of a license was not "inimical to the common defense." Given this mandate, the Commission could reasonably consider a new proliferation risk assessment requirement to be within its general authority to issue such regulations as are "necessary to carry out the purposes of [the AEA]."[19]

The preceding suggests that the Commission has been provided with broad authority, under various provisions of the AEA, to issue rules prescribing licensing requirements in order to promote the "common defense and security." As such, it would appear that the Commission could reasonably conclude that it has sufficient existing authority to promulgate a regulation requiring that applicants provide the Commission with a proliferation risk assessment as part of the license application process. Such a requirement, however, would likely have to be implemented through the notice and comment rulemaking procedures of the Administrative Procedure Act.[20]

(...continued)

statute significant deference. Chevron U.S.A. Inc. v. Natural Resources Defense Council, 467 U.S. 837 (1984).

[19] 42 U.S.C. § 2201(p).

[20] 5 U.S.C. § 553.