POLICY ISSUE
(Notation Vote)

August 24, 2006 SECY-06-0186

FOR: The Commissioners

FROM: Luis A. Reyes
Executive Director for Operations /RA/

SUBJECT: INCREASING LICENSING TERMS FOR CERTAIN FUEL CYCLE FACILITIES

PURPOSE:

To obtain Commission approval of the staff's recommendations to implement maximum license terms of 40 years for license renewals and new applications, for facilities required to submit integrated safety analysis summaries in accordance with 10 CFR Part 70, Subpart H, requirements. Terms of less than 40 years will be considered on a case-by-case basis. Currently, two operating fuel cycle facilities under timely renewal have requested 20-year license renewal terms, and staff will await direction from the Commission before making a decision on the licensees' requests. This paper does not address any new commitments.

BACKGROUND:

Section 103(c) of the Atomic Energy Act ("Commercial Licenses") gives the Commission discretion in setting license terms for the possession and use of source and special nuclear material. Specifically in this regard, the Act states:

> Each such license shall be issued for a specific period, as determined by the Commission, depending on the type of activity to be licensed, but not exceeding forty years, and may be renewed upon expiration of such period.

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As previously noted by the NRC on May 21, 1991, (*Federal Register,* 56 FR 23310, 23312 col. 3), the term for a materials license is a matter of Commission discretion and is not established by statute (i.e., the Commission gave notice that the license term for the Louisiana Energy Services Claiborne uranium enrichment facility would be 30 years).

10 CFR 70.22(a)(3) does not specify a license term for Part 70 licensees. On June 19, 1990, (*Federal Register*, 55 FR 24948-49), the Commission gave notice that the license term for major operating fuel cycle licensees (i.e., licensees authorized to possess and use source material for production of uranium hexaflouride, pursuant to 10 CFR Part 40, and licensees authorized to possess and use special nuclear material for reactor and fuel fabrication and/or recovery, pursuant to 10 CFR Part 70) would be increased from a 5-year term to a 10-year term, at the next license renewal. The bases for this change were that: (1) operators of major fuel cycle facilities had become stable over the previous ten years, with few significant changes to their licenses and operations; and (2) those licensees were required to update the safety demonstration sections of their licenses every two years, rather than every five years, as previously required.

In SECY-96-252, "Extension of License Term for Material Licensees," dated December 17, 1996, the staff requested that the Commission approve a 10-year license term for materials licensees. In the Staff Requirements Memorandum (SRM) for SECY-96-252, dated January 24, 1997, the Commission approved a 10-year license term for materials licensees, with the proviso that the use of license terms shorter than 10 years is appropriate, on a case-by-case basis, and for situations where the industry or NRC has not had extensive experience in using or regulating the proposed use of the material. In addition, the SRM stated that, if needed, guidance on implementing a term of less than 10 years should be developed by the staff. On April 22, 1997, staff developed such guidance in Office Policy and Guidance (PG) Directive, PG 1-27, "Issuance of Licenses for Terms of Less Than 10 Years."

DISCUSSION:

The reasons that the staff recommend that the maximum license term for Part 70, Subpart H, licensees be increased from 10 years to 40 years are because this is consistent with the NRC Strategic Plan that will allow NRC to continue to support safe operation of licensed facilities, reduces regulatory burden, enhances effectiveness and efficiency; and is based on the experiences that staff has had with those licensees in the recent past after the addition of Subpart H requirements to 10 CFR Part 70.

Linking Part 70 Reviews to the NRC Strategic Plan

The strategic goals for safety and effectiveness are directly linked to Part 70 reviews. The strategic goal for safety states: "ensure protection of public health and safety and the environment." Four of the five strategic outcomes and two of the strategies associated with that goal are reflected in NRC reviews of Part 70 renewals and new applications. Those strategies are: (1) developing systematic improvements in NRC's regulatory program to ensure the safe use and management of radioactive materials; and (2) using sound science and state-of-the-art methods to establish risk-informed regulations. The strategic goal for effectiveness supports realistic NRC actions and is stated as: "ensure that NRC actions are effective, efficient, realistic, and timely." The strategic outcome and two of the strategies associated with that goal are

reflected in NRC reviews of Part 70 renewals and new applications. Those strategies are: (1) using state-of-the-art methods and risk insights to improve the effectiveness and realism of NRC actions; and (2) improving NRC regulation by adding needed requirements and eliminating unnecessary requirements.

Increasing Licensing Terms is Consistent with the NRC Strategic Goals

Consistent primarily with the strategic goals for safety and effectiveness, the rationale for increasing the licensing terms for license renewal and new applications is described below:

Decommissioning Funding:

A review of decommissioning financial assurance is required during license renewal and new application reviews. Since 2003, licensees must update their cost estimates for decommissioning every 3 years. This update provides sufficiently frequent reviews such that NRC does not have to rely on the license renewal review to perform a timely evaluation of the adequacy of financial assurance. Therefore, decommissioning funding requirements would be satisfied regardless of the duration of the license term.

Environmental Effects:

The National Environmental Policy Act (NEPA) requires that a Federal agency evaluate the cumulative effects from the combination of individually minor actions. For amendments, license renewals, and new applications, a licensee or applicant is required to submit an Environmental Report (ER). For individual amendments, license renewals, and new applications, based on the complexity, NRC writes either an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). If an EA reveals that the licensing action could have significant environmental impacts, then an EIS is prepared. In an EA or EIS, NRC evaluates environmental impacts and cumulative effects occurring over a period of time. NEPA requirements would be satisfied regardless of the duration of the license term. Increasing license terms would mean that fewer EAs/EIS' would be written, but the EAs/EIS' would be more comprehensive to cover the increased license term.

Facility Changes and Safety Basis:

Licensees are required to submit to NRC certain facility changes for approval; annual summaries of facility changes that did not need NRC pre-approval; Integrated Safety Analysis (ISAs) summaries for approval; and annual updates to the ISA summaries. Both the annual summaries of facility changes that did not need NRC pre-approval and the annual updates to the ISA summaries will be reviewed by staff. NRC must approve facility changes, by license amendment, unless the changes do not require pre-approval by NRC under §70.72(d)(2). If a licensee wanted to operate a new process/technology at an existing facility, then NRC would review the amendment request, including the ISA Summary to cover the new process/technology. This would be an efficiency gain because there would not be a new license to review.

An ISA is a systematic analysis to identify facility and external hazards and their potential for initiating accident sequences, the potential accident sequences, their likelihood and consequences, and the items relied on for safety (IROFS). IROFS are structures, systems,

equipment, components, and activities of personnel that are relied on to prevent potential accidents at a facility that could exceed the performance requirements in §70.61 or to mitigate their potential consequences. An ISA Summary provides a synopsis of the results of the ISA and is required to contain the information specified in §70.65(b).

Before the implementation of Part 70, Subpart H, a large part of license renewal was the review of the safety basis of a licensee's facility. There was no regulatory requirement for a licensee to submit changes to the safety basis before license renewal. An ISA Summary is more extensive than what was formerly in the safety basis section of a license application. Also, a licensee is required to keep the ISA Summary up-to-date and provide an annual update to NRC. The annual ISA Summary update will allow a more efficient and frequent review of the facility safety basis. The safety bases of facilities would effectively be reviewed by staff on an on-going basis during the 40 years between license renewals. For new applications, the change from submitting the safety basis information in the license application to submitting safety basis information in the ISA Summary, does not affect the duration of a license term.

Material Degradation and Aging:

Unlike reactors, fuel cycle licensees can halt processes at any time to replace or repair equipment in the facilities. Thus, material degradation and aging can be dealt with throughout the lifetime of fuel cycle facilities, rather than at outage times, as is often the case at reactors. Since licensees will submit annual updates of ISA summaries to NRC for approval, NRC will be aware of changes due to material degradation or aging throughout the lifetime of facilities. Therefore, material degradation and aging do not affect the duration of a license term.

RECOMMENDATION:

NRC staff recommends that the Commission approve a policy change to implement maximum license terms of 40 years for license renewals and new applications, specific to licensees required to submit ISA summaries according to Part 70, Subpart H, requirements. Terms of less than 40 years will be considered on a case-by-case basis. Examples of criteria for less than 40 year terms are safety risk to the facility and licensee using a new process/technology.

IMPLEMENTATION:

Should the Commission approve the staff's recommendation, the staff proposes to implement the increased license renewal and new application terms by publishing a *Federal Register* notice concerning the policy change, and developing and implementing Office guidance. In addition, the two licensees who requested only a 20-year renewal term will be allowed to request up to a 40-year renewal term. However, those licensees would have to submit a revised ER covering the requested term, and the NRC would perform at least an EA covering the requested term.

RESOURCES:

The staff estimates that it currently takes 1.2 full-time equivalent (FTE) and $100,000 to complete a license renewal for a 10-year term which includes the time required to perform the ISA summary review. Given the increased complexity of the environmental review for a 40-year term, the staff estimates that it would take 1.4 FTE and $125,000 to complete a license renewal for a 40-year term. The staff estimates that a similar increase in resources is needed for new application reviews because of the increased complexity of the environmental review for a 40-year versus 10-year term.

Under the current policy the NRC would expend 4.8 FTE and $400,000 for license renewal reviews over 40 years. This policy change would result in approximately a 70% reduction in resource expenditures for license renewal reviews for 10 CFR Part 70, Subpart H licensees over 40 years (i.e., 1.4 FTE and $125,000). The exact effect on licensee fees is unknown but not expected to be significant.

The resources required to implement the policy change and to perform the license renewal and new application reviews are within the FY 2006 and FY 2007 budget, through the FY 2008 budget request. The NRC would not realize the resource savings of this policy change until at least 2016, when the next cycle of license renewals is scheduled to begin.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection. The Office of the Chief Financial Officer and the Office of Information Services have reviewed this paper and have no objections.

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