



# **PERIODIC SAFETY REVIEW OF U.S. RESEARCH REACTORS: LICENSE RENEWAL**

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## **Overview of License Renewal (1/2)**

- Facility Operating License usually issued for a period of 20 years, but not longer than 40 years
- License renewal is required to continue to operate the facility
- Renewed license usually issued for a period of 20 years
- Renewed licenses may be renewed

## Overview of License Renewal (2/2)

- License renewal may include changes to the facility design or operation that would normally require a license amendment
  - Change in the licensed maximum power
  - Change in the maximum fuel burnup
  - Change in the facility administrative controls
  - Change in the cooling system design

## **License Renewal Process (1/3)**

- U.S. Nuclear Regulatory Commission (NRC) informs the licensee 1 year beforehand that the license is due to expire
- Licensee files application for license renewal 30 days before the license expires

## **License Renewal Process (2/3)**

- Licensee operates the facility in accordance with the current Facility Operating License until the NRC makes a final determination on the renewal application (timely renewal)
- NRC accepts or rejects the application
- NRC informs the public of the application

## **License Renewal Process (3/3)**

- NRC reviews the application
- Opportunity for public involvement
- NRC issues a renewed license
- Licensee conducts activities in accordance with the renewed license

# License Renewal Application (1/2)

- Final Safety Analysis Report (FSAR)
- Technical Specifications
- Emergency Plan
- Security Plan
- Operator Training and Requalification Plan

## **License Renewal Application (2/2)**

- Quality Assurance Plan
- Startup Plan
  - Required only if the application requests a major change in facility operations, for example, an increase in licensed maximum power that requires upgrades to systems or instrumentation
- Environmental Report



## **NRC Application Review (1/6)**

- Initial review for completeness and acceptability
- NRC officially files the application on the facility docket
- Inform the public of the application and offer the public an opportunity to request a hearing

## **NRC Application Review (2/6)**

- Technical review of the Final Safety Analysis Report
  - Verify safety-related conclusions
  - Use technical guidance documents
  - Use inspection reports
  - Use operating experience
  - Use prior NRC approval

## **NRC Application Review (3/6)**

- Review of the Technical Specifications to verify compliance with the regulations
  - Technical Specifications may require updates to meet the current regulations
- Review of Emergency Plan, Security Plan, Operator Training and Requalification Plan, and Quality Assurance Plan against current guidance

## **NRC Application Review (4/6)**

- If required, review of startup plan to ensure the licensee can safely bring the reactor into routine operation in accordance with the renewed license
- Review of the environmental report to verify compliance with the U.S. National Environmental Policy Act
  - Endangered species, water resources, environmental justice

## **NRC Application Review (5/6)**

- Request for Additional Information
  - A question asked to provide missing information
  - A question asked to clarify an inconsistency
  - A question asked to resolve a misunderstanding
  - Used for supplementing the application with information that must be part of the official NRC record

## **NRC Application Review (6/6)**

- An application for renewal of a Facility Operating License for a testing facility shall be reviewed by the Advisory Committee on Reactor Safeguards
- An application for renewal of a Facility Operating License for a research reactor may be reviewed by the Advisory Committee on Reactor Safeguards

## **NRC Renewal Documentation (1/2)**

- Final Environmental Impact Statement required for a testing facility
- Environmental Assessment and Finding of No Significant Impact required for a research reactor
- Notice informing the public of the Final Environmental Impact Statement or Environmental Assessment

## **NRC Renewal Documentation (2/2)**

- License Renewal Package
  - Renewed Facility License
  - Technical Specifications
  - Final Safety Evaluation Report
  - Notice informing the public of the license renewal



## **License Renewal Goals (1/1)**

- Provide reasonable assurance that the facility will continue to operate without undue risk to public health and safety or the environment
- Establish a current licensing basis
- Promote minimum regulation in accordance with the U.S. Atomic Energy Act



## **Conclusion (1/1)**

- Questions?
- Thank you for your attention.