



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

William B. Kennedy, Project Manager
Research and Test Reactor Licensing Branch
U.S. Nuclear Regulatory Commission

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.