



**Non-power Production or
Utilization Facility (NPUF)
License Renewal
Proposed Rulemaking**

May 24, 2017



Agenda

- 9:00am – 9:10am: Welcome/Introductions
- 9:10am – 10:30am: NRC review/status of NPUF rulemaking technical issues
- 10:30am – 10:50am: Break
- 10:50am – 11:50am: Public comments and discussion on proposed NPUF rulemaking
- 11:50am – 12:00pm: Closure

Public meeting slides: ADAMS Accession No. ML17135A069



Meeting Ground Rules

- Limit interruptions:
 - Turn off cell phones
 - Minimize side conversations
- Speak one at a time
- Identify yourself when speaking
 - Please state your name, organization, and your comment or question
 - If you are in the meeting room please use the microphone
- Be respectful of other speakers/participants
- If participating by webinar please use the:
 - Chat function to send questions or
 - Ask questions via the bridgeline at the designated opportunities
 - Please mute your phone (*6)



Purpose of Today's Meeting

- Answer questions on the proposed NPUF rulemaking.
- Today's meeting is a Category 3 public meeting, which means that public participation is actively sought in the discussion of the regulatory issues during the meeting.
- This meeting is not designed, nor intended to solicit or receive formal comments on topics in the proposed NPUF rulemaking activity. Also, no regulatory decisions will be made at today's meeting.



NPUF Proposed Rule Overview

On March 30, 2017, the NRC published a proposed rule in the *Federal Register* for a 75-day public comment period to:

- Address Commission direction to streamline the NPUF license renewal process by establishing a more efficient, effective and focused regulatory framework
- Fix existing shortcomings in regulations for NPUF licensees
- *Federal Register* notice: ADAMS Accession No. ML17068A031
 - Public comments are due by June 13, 2017.

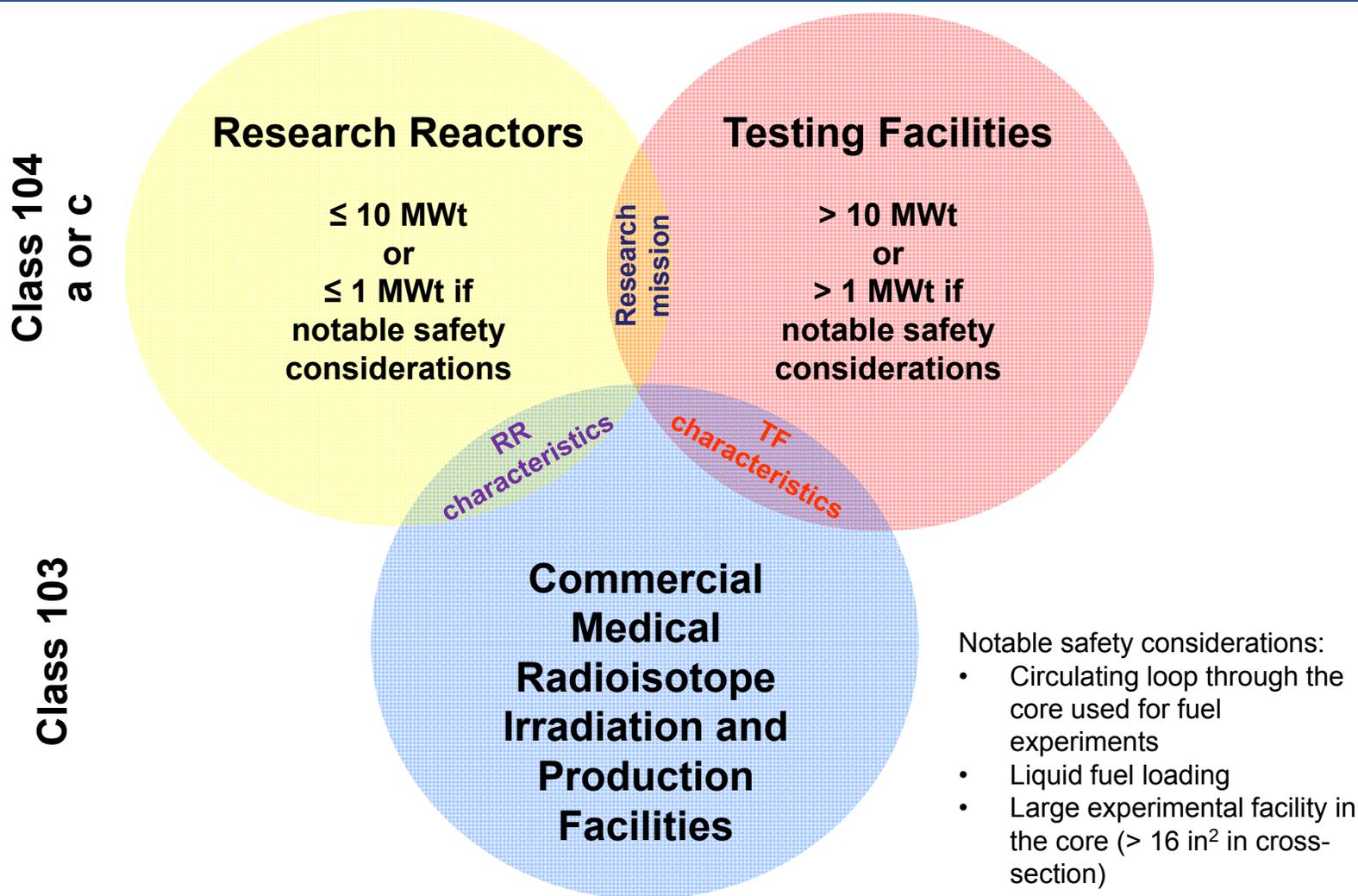
⇒ 9 rulemaking objectives



NPUF Proposed Rule Overview

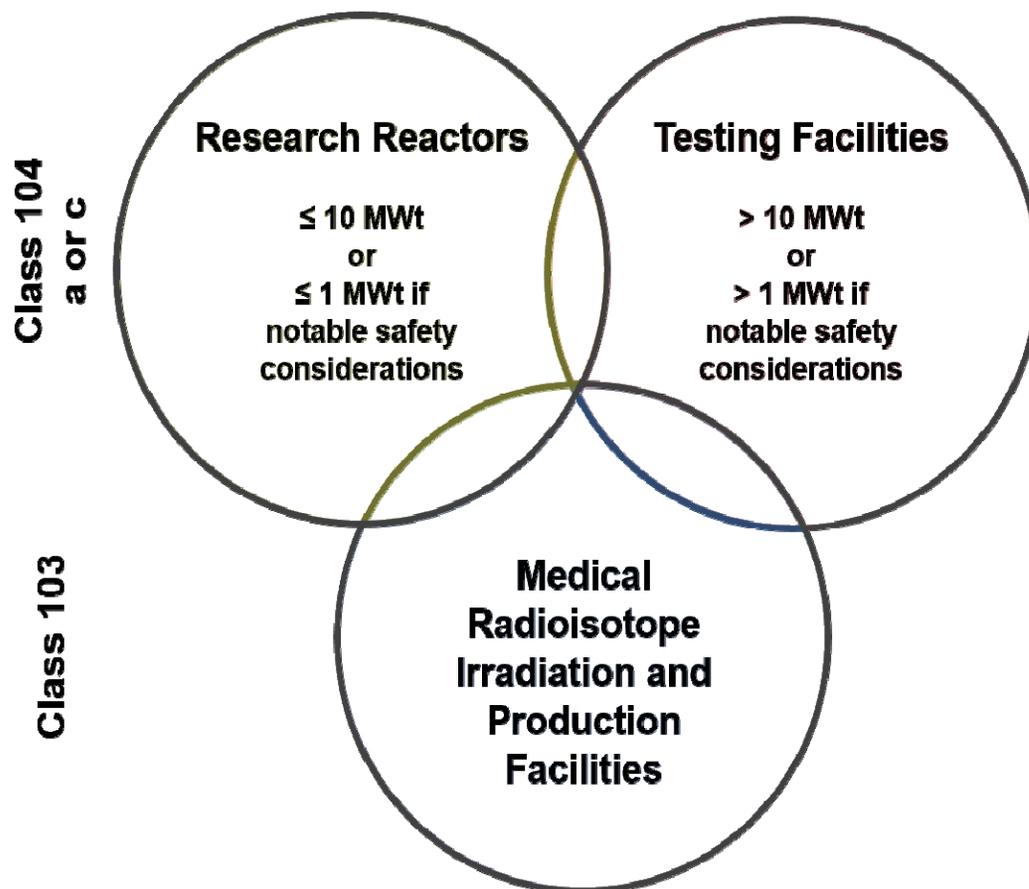
NPUF Proposed Rule Changes	Class 103 Facilities	Class 104a Facilities	Class 104c Facilities	
	Commercial	Medical Therapy	R&D	Testing
1. Create a definition for NPUF	✓	✓	✓	✓
2. Eliminate license terms	N/A	✓	✓	N/A
3. Define the license renewal process	✓	N/A	N/A	✓
4. Require updated FSAR submittals	✓	✓	✓	✓
5. Amend timely renewal provision	✓	✓	✓	✓
6. Provide an accident dose criterion	✓	✓	✓	N/A
7. Extend applicability of 10 CFR 50.59	✓	✓	✓	✓
8. Clarify existing environmental reporting requirements	✓	✓	✓	✓
9. Eliminate NPUF financial qualification information requirement	✓	N/A	N/A	✓

Discussion of Proposed Rule Requirements



1. Create a Definition for NPUF

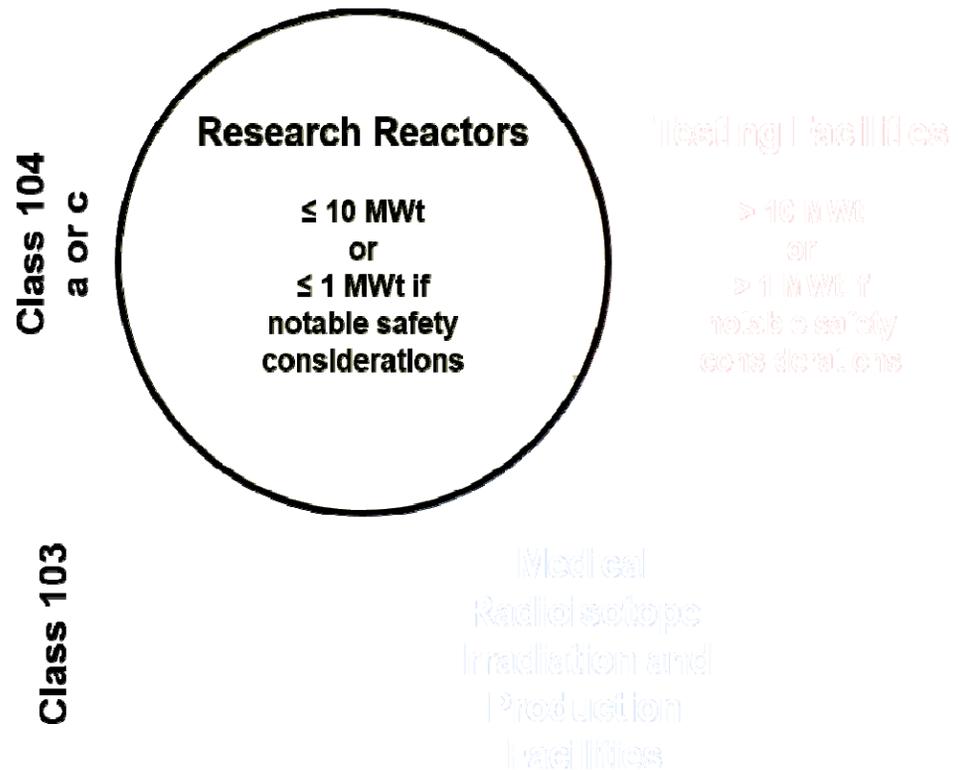
- Revise 10 CFR 50.2, Definitions, to establish a single term to capture all non-power facilities licensed under part 50
- Ensure clarity and consistency for the applicability of NPUF regulations





2. Eliminate License Terms

- Exempt Class 104a and 104c NPUFs, other than testing facilities, from 40-year fixed term in 10 CFR 50.51
- No license term specified in AEA for Class 104 NPUFs
- Consistent with AEA's minimum regulation standard
- Reduce burden for licensees and NRC, but maintains public health and safety





No Notable Safety Considerations

- Low power levels of 10 MWt or less
 - small fission product inventory
 - small radiological consequence for maximum hypothetical accident
- Low energy systems
 - low operating power and temperatures
 - minimal decay heat
- No significant aging considerations
 - simple designs
 - proactive aging management / aging-related surveillance requirements
 - loss of coolant is an analyzed condition
- Slowly evolving licensing basis
 - Very low number of design changes each year
 - Few rulemakings apply



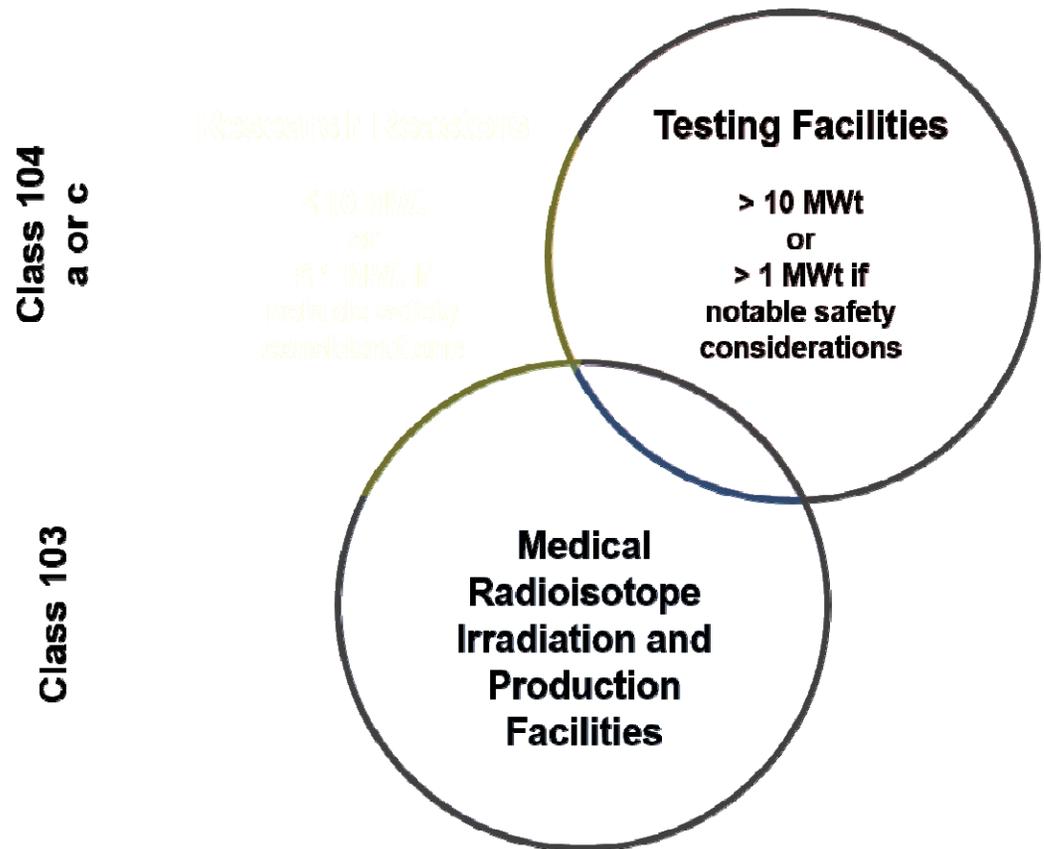
No Nexus between License Renewal and Safety

Class 104a or c, except testing facilities

- In light of the following measures:
 - NUREG-1537, "Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors"
 - Inspection program
 - Technical specifications
 - Existing reporting requirements
 - Safety issues with SSCs
 - Maintenance activities
 - Proposed rule requirements

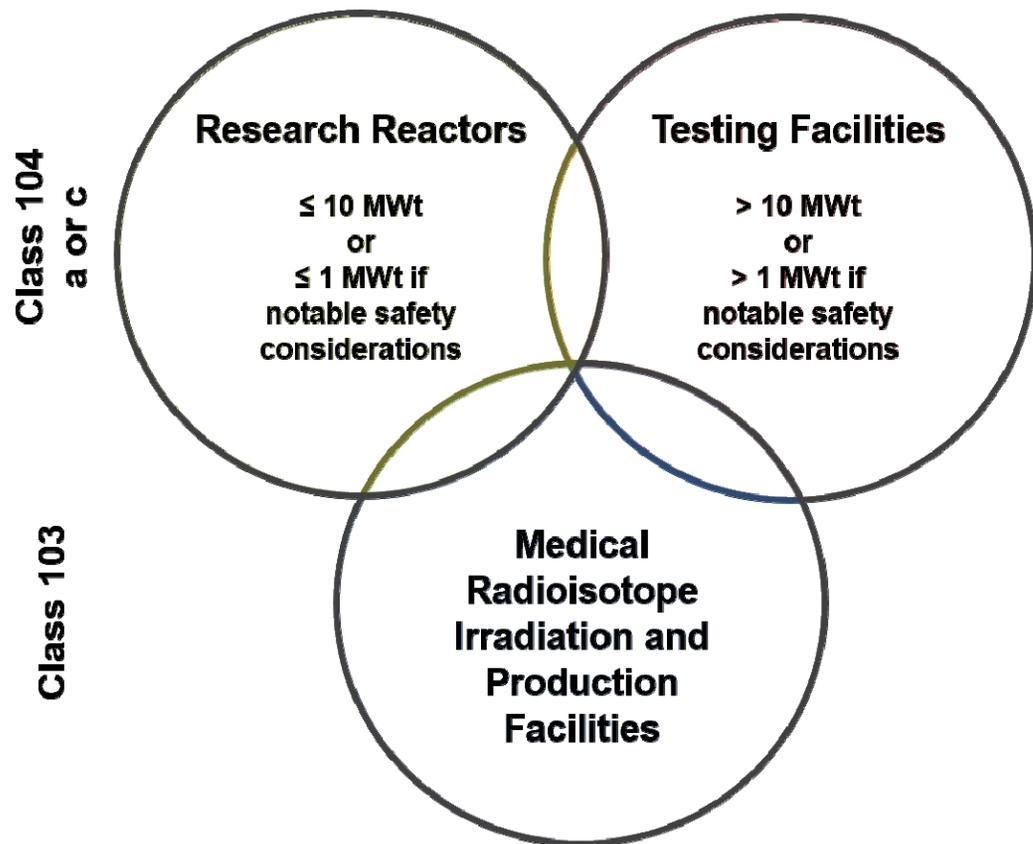
3. Define the License Renewal Process

- Consolidate license renewal requirements under 10 CFR 50.135 for testing facilities and NPUFs licensed under 10 CFR 50.22
- Clarify license renewal process
- Enhance regulatory efficiency



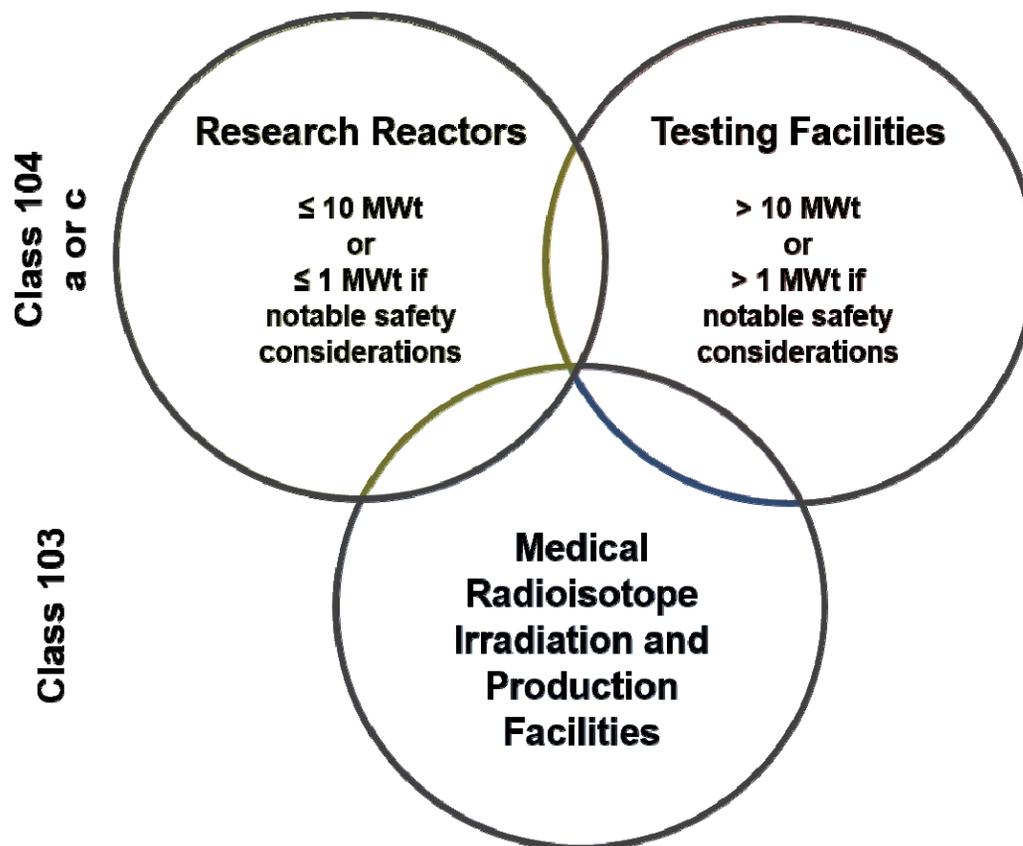
4. Require Updated FSAR Submittals

- Extend applicability of 10 CFR 50.71(e) to NPUFs
- Ensure timely documentation of changes to licensing basis
- Benefit knowledge management, NRC's inspection program, and licensee operator training and exams



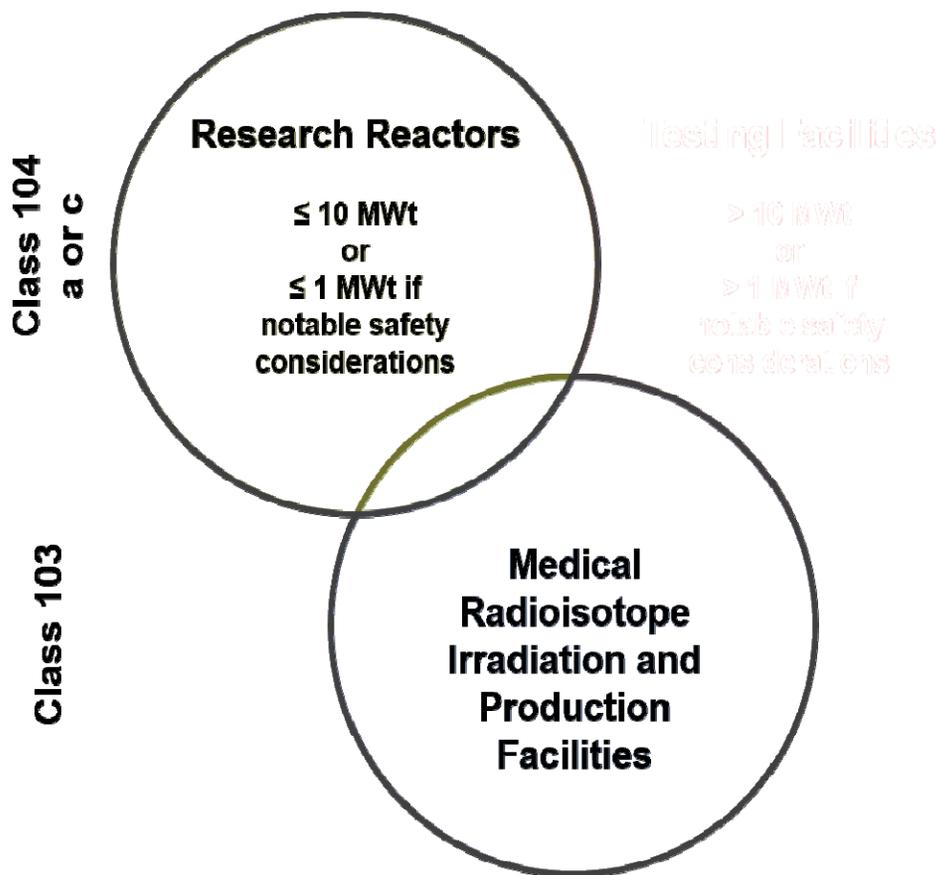
5. Amend Timely Renewal Provision

- Create two-year timely renewal for Class 103 and testing facilities and exempt Class 104a and 104c NPUFs, other than testing facilities
- 30 days in 10 CFR 2.109 is not a sufficient period of time for adequate assessment of license renewal application
- Two years would provide sufficient time and allow facility to operate under current license terms



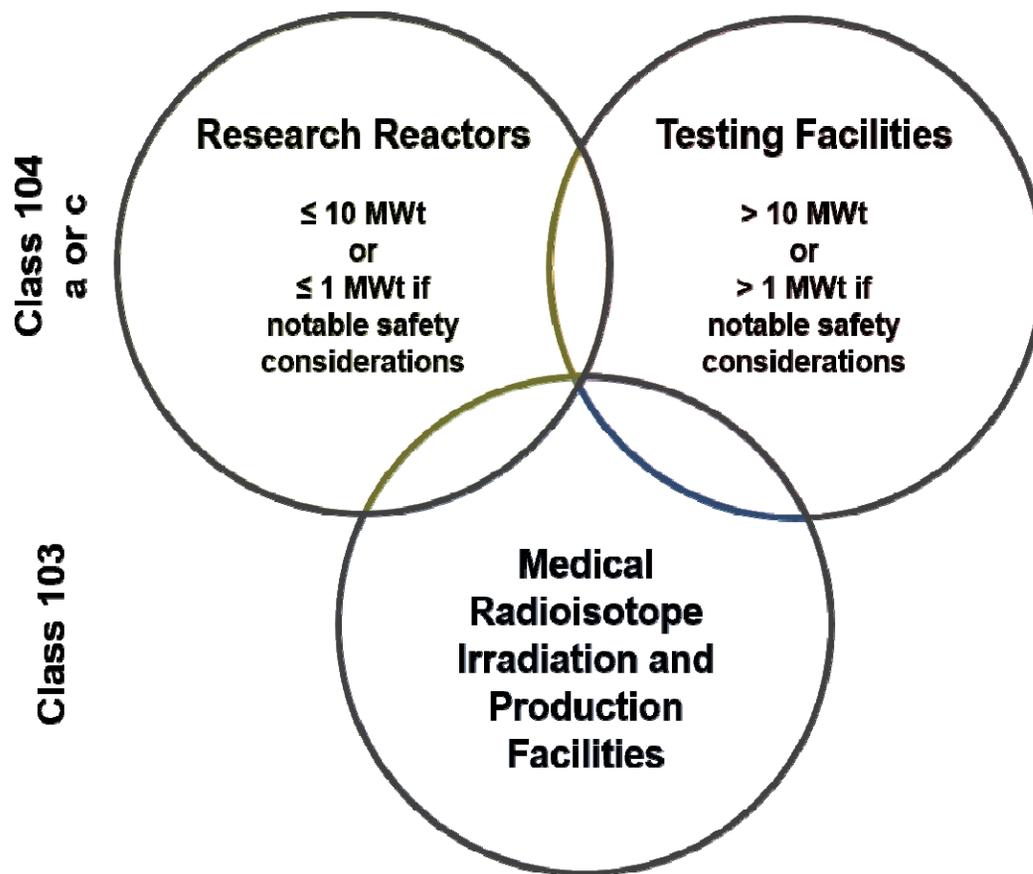
6. Provide an Accident Dose Criterion

- Create new accident dose criterion for NPUFs, other than testing facilities, in 10 CFR 50.34
- Part 20 public dose limits are unnecessarily restrictive as accident criteria
- Proposed criterion would align with early phase EPA PAG and provide adequate protection from unnecessary exposure to radiation



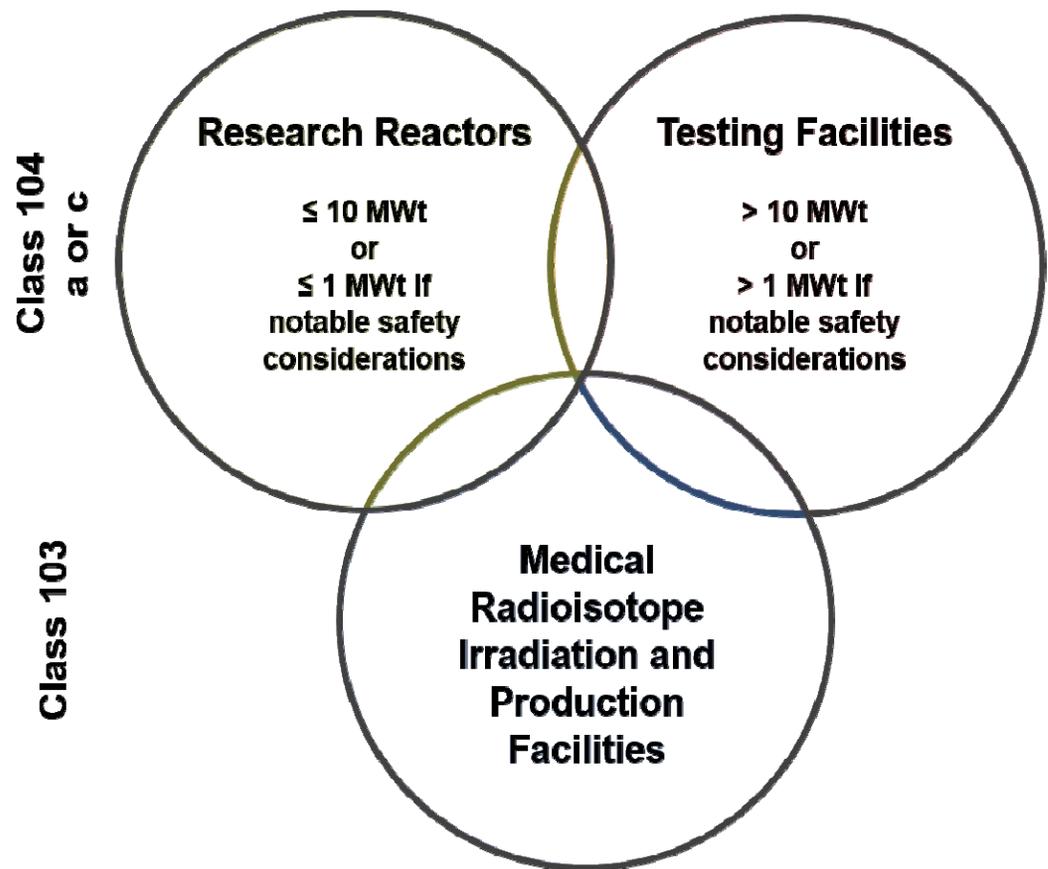
7. Extend Applicability of 10 CFR 50.59

- Extend applicability to NPUFs regardless of decommissioning status
- 10 CFR 50.59 currently is not applicable to NPUFs once fuel is moved offsite
- Avoid burden of issuing license amendments



8. Clarify Existing Environmental Reporting Requirements

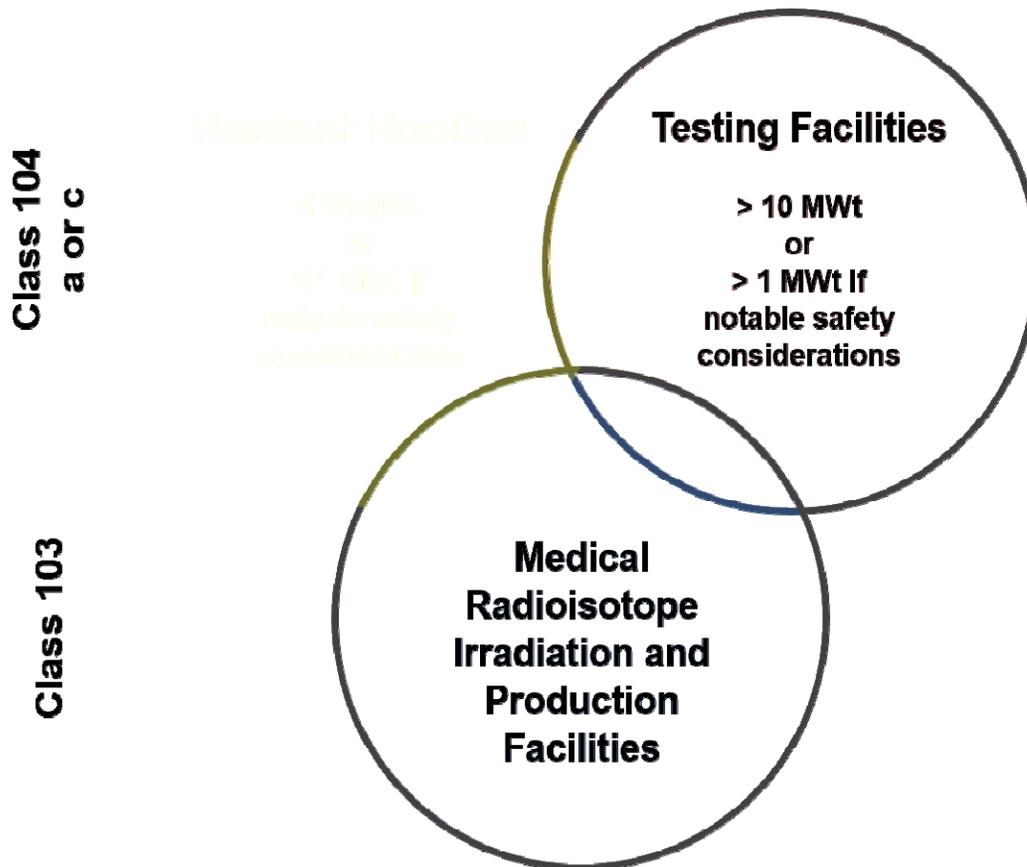
- Add requirement in 10 CFR 51.56 for NPUFs to provide an environmental report per 10 CFR 51.45
- Historically, NRC has relied on 10 CFR 51.41 to collect “environmental information”
- Improve consistency and clarify Part 51 requirements for licensing actions





9. Eliminate NPUF Financial Qualification Information Requirement

- Eliminate 10 CFR 50.33(f)(2) financial qualification requirement at license renewal only
- Primary means to ensure safety is through NRC's oversight and enforcement programs
- Reduce licensee burden without compromise to public health and safety



Draft Regulatory Guide

- Draft Regulatory Guide (DG–2006), “Preparation of Updated Final Safety Analysis Reports for Non-power Production or Utilization Facilities” issued for comment
- Provides an acceptable approach for use in updating the licensee’s final safety analysis report (i.e., 10 CFR 50.71(e)).
- ADAMS Accession No. ML17068A041

Regulatory Analysis

- Costs and Cost Savings (Undiscounted)

	NRC	Licensee
Implementation Costs	\$720,000	\$140,000
Operations Costs	\$1.8 million	\$1.6 million
Cost Savings	\$12 million	\$5.5 million
Net Benefits (Cost Savings – Costs)	\$9.4 million	\$3.8 million

- Total Net Benefit (Undiscounted): \$13 million
 - 3 Percent discounting: \$8.9 million
 - 7 Percent discounting: \$5.3 million
- ADAMS Accession No. ML17068A038

Regulatory Analysis

- Non-expiring licenses would allow licensees to avoid future license renewal costs

Averted Operational Costs for Affected Entities (2016\$)

		Low	Medium	High
NPUF Averted Operational Cost	A	\$120,000	\$150,000	\$250,000
Number of Licensees	B	5	9	14
Averted Operational Cost per Category	$C = A \times B$	\$580,000	\$1,300,000	\$3,600,000
Undiscounted Total Present Value Averted Operational Cost	$D = \sum (C)$		\$5,500,000	
Total Present Value NPUF Averted Operational Cost at 3% discounting			\$3,900,000	
Total Present Value NPUF Averted Operational Cost at 7% discounting			\$2,500,000	



Regulatory Analysis

- Eliminating licensing terms would reduce the burden on both the licensees and NRC staff
- Total net quantitative benefit of the proposed rule: \$13 million
- Maintaining the safe operation of the facility while protecting the public health and safety

Backfit Considerations

- Section 50.109 does not apply to NPUFs
 - The regulatory basis for backfitting was written to be applied to nuclear power reactors.
 - In a 2012 rulemaking on non-power reactors, the NRC stated, “The NRC has determined that the backfit provisions in § 50.109 do not apply to test, research, or training reactors because the rulemaking record for § 50.109 indicates that the Commission intended to apply this provision to only power reactors, and NRC practice has been consistent with this rulemaking record.”
- Section 50.109 does not apply to this proposed rule
 - The Commission is directed by Section 104 of the AEA to impose the minimum amount of regulation on the licensee consistent with its obligations under the AEA.



Environmental Assessment and Information Collections

- Environmental assessment: no significant effect on the quality of the human environment from this action
 - ADAMS Accession No. ML17068A035
- Information collections (OMB Statement): recordkeeping and reporting burden associated with FSAR update
 - ADAMS Accession No. ML17068A077



Discussion of Specific Questions

Eliminating License Terms:

The NRC is proposing that license terms for NPUFs, other than testing facilities, licensed under 10 CFR 50.21(a) or (c) would be removed from existing licenses via order. Are there any unintended consequences associated with removing license terms in this manner? Provide the basis for your answer.



Discussion of Specific Questions

Updated FSAR Submittals:

Proposed § 50.71 would require all NPUFs to submit an update to the FSAR originally submitted with the facility's license application every 5 years. The NRC staff plans to specify the first submittal date in orders issued to each facility. Should the NRC specify the date by which each facility or category of facility must submit its first updated FSAR in the rule language instead of using site-specific orders? Are there any unintended consequences of establishing the first submittal dates through orders? Please provide the basis for your answer.



Discussion of Specific Questions

License Renewal:

Proposed § 50.135 outlines the license renewal process for facilities licensed under § 50.22 and testing facilities licensed under § 50.21(c). Should any elements of the process be removed from or added to the NRC proposal? Please provide specific examples.



Discussion of Specific Questions

Industrial or commercial facilities:

The NPUFs licensed under § 50.22 are those facilities that are used for industrial or commercial purposes. For example, a facility used primarily for the production and sale of radioisotopes other than for use in research and development would be considered a commercial production or utilization facility and therefore would be licensed under § 50.22. Currently, license applications for such NPUFs pass through additional steps in the licensing process (e.g., mandatory public hearings). These additional steps are required even though many such facilities have the same inherent low risk profile as low-power NPUFs licensed under § 50.21(a) or (c) which are not required to proceed through these additional steps. Are these additional steps necessary for all NPUFs licensed under § 50.22, or would it be more efficient and effective to differentiate low-power NPUFs licensed under § 50.22 from high-power NPUFs licensed under § 50.22? Elaborate on requirements that could be tailored for low-power, low-risk NPUFs licensed under § 50.22, including recommended criteria (e.g., power level or other measure) for establishing reduced requirements.



Discussion of Specific Questions

Testing Facilities:

The NRC is proposing that license terms would not expire for NPUFs, other than testing facilities, licensed under § 50.21(a) or (c), whereas testing facilities would continue to have fixed license terms that would require periodic license renewal. While the AEA does not establish a fixed license term for testing facilities, these facilities are currently subject to additional regulatory requirements due to higher power levels (e.g., mandatory public hearings, ACRS review, and preparation of environmental impact statements). Is a fixed license term necessary for testing facilities licensed under § 50.21(c) or would it be more efficient and effective to also grant testing facilities non-expiring licenses? Provide the basis for revising NRC requirements to account for the higher risk of testing facilities licensed under § 50.21(c) relative to other NPUFs licensed under § 50.21(a) or (c), including recommended criteria for establishing eligibility for a non-expiring license.



Discussion of Specific Questions

Timely Renewal:

For NPUFs licensed under § 50.22 and testing facilities licensed under § 50.21(c), does the revision to the timely renewal provision from 30 days to 2 years provide an undue burden on licensees? If so, in addition to your response, please provide information supporting an alternate provision for timely renewal.



Discussion of Specific Questions

Accident Dose Criterion:

The NRC is considering requiring each NPUF licensee, other than testing facilities, to demonstrate in its accident analysis that an individual located in the unrestricted area following the onset of a postulated accidental release of licensed material, including consideration of experiments, would not receive a dose in excess of 1 rem (0.01 Sv) TEDE for the duration of the accident. Is the accident dose criterion 1 rem (0.01 Sv) TEDE in proposed § 50.34(a)(1)(ii)(D)(2) appropriate for NPUFs, other than testing facilities? If not, what accident dose criterion is appropriate? Please provide the basis for your answer.



NPUF Proposed Rulemaking

Questions



Public Comments on Proposed Rule

- Public comments should be submitted **by June 13, 2017.**
- Public comments collected via:
 - **Online:** www.regulations.gov (Preferred Method)
 - Search for Docket ID: **NRC-2011-0087**
 - **Email:** Rulemaking.Comments@nrc.gov
 - **Fax:** Secretary, U.S. Nuclear Regulatory Commission at 301-415-1101
 - **Mail:** Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff
 - **Hand delivery:** 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 a.m. and 4:15 p.m. (Eastern Time) Federal workdays; telephone: 301-415-1677

Closing Remarks

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