



**Office of Nuclear Material Safety
and Safeguards
Division of Fuel Cycle Safety and
Safeguards**

Regulatory Guide (RG)
Update Program

Program Overview

- In 2006, Commission directed staff to update all RGs
- RES/Division of Engineering/Regulatory Guide Development Branch coordinates RG revisions
- Review/Revision of all active RGs
 - Initially focused on RGs most needed to support new, near-term reactor licensing activities
 - Update of all RGs to be *completed by end of 2012*

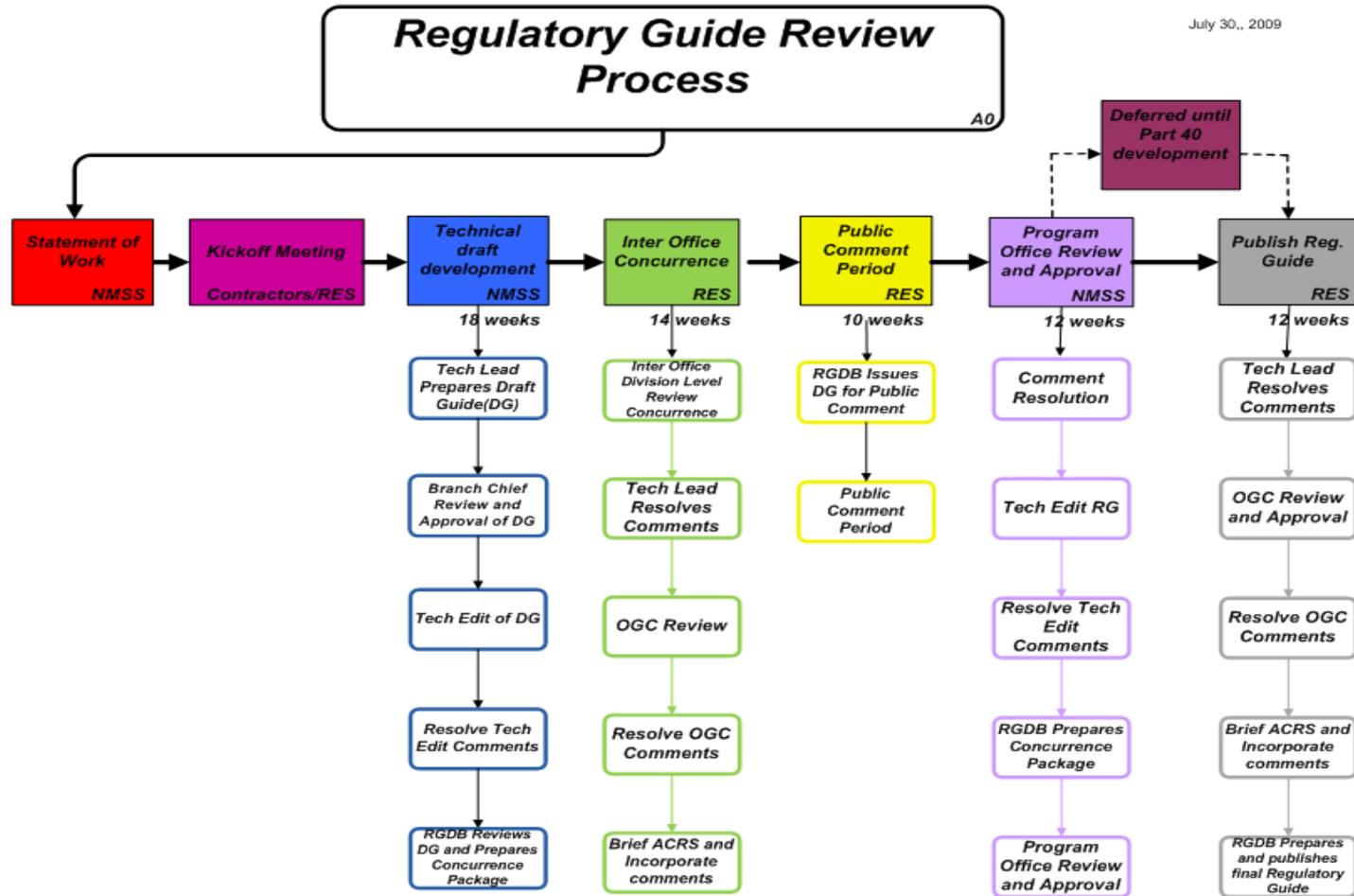
Scope of work

- 50 RGs originally assigned to NMSS/FCSS
 - 39 (FCSS) + 11 (MC&A)
- 17 additional RGs on reprocessing
 - Updates on these are deferred
 - These RGs will be updated, combined or withdrawn as a part of the effort to develop the regulatory framework for reprocessing

Initial review

- Identified that 31 (of 50 original) FCSS RGs could be condensed into 11 RGs
- Total number of FCSS RGs to be revised = 30

July 30., 2009



Information Resources to keep track

- Draft NRC Regulatory Guides - Fuels and Materials Facilities (Division 3)
 - <http://www.nrc.gov/reading-rm/doc-collections/reg-guides/fuels-materials/draft-index.html>
- Status of Regulatory Guides Reviewed/Developed by Fuel Cycle Safety and Safeguards (FCSS)
 - <http://www.nrc.gov/materials/fuel-cycle-fac/regs-guides-comm/reg-guides-status.html>

Current Status

- Of the 30 RGs NRC Office of Research has taken the lead for update of 3 RGs
 - RG 8.2, Guide for Administrative Practices in Radiation Monitoring
 - RG 8.4, Direct Reading and Indirect Reading Pocket Dosimeters
 - DG-8039, Effective Dose Equivalent From External Exposure
- That leaves 27 RGs to be updated by FCSS
 - 3 RG updates have been completed
 - 24 RGs in the process of being updated

Current Status (continued)

- Current status of 24 remaining updates:
 - SOWs completed, awarded - kick off meetings held (5)
 - SOWs completed, awarded - kick off meetings not held (5)
 - Revision under development by FCSS staff (2)
 - NRC Interoffice concurrence (2)
 - For subsequent release to request public comments
 - Draft revision completed and issued for public comment (2)
 - Program Office review and approval (7)
 - Incorporation of public comments
 - Deferred until 10 CFR Part 40 is developed (1)

Current Status (continued)

- **FCSS RG (draft) to be released for public comments within 6 months**
 - DG 3030 (RG 3.71)
 - Nuclear Criticality Safety Standards for Fuels and Material Facilities
 - RG 5.67
 - MC&A For Uranium Enrichment Facilities

Current Status (continued)

- **FCSS RGs currently out for public comments**
 - DG 3039 (RG 3.67)
 - Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities
 - DG 4018 (RG 4.20)
 - Constraint on Releases of Airborne Radioactive Materials to the Environment for Licensees Other than Power Reactors

Current Status (continued)

- **FCSS RGs to be issued as final within 6 months**
 - DG 3040 (RG 3.13)
 - Design, Construction and Inspection of Embankment Retention Systems at Fuel Cycle Facilities

Current Status (continued)

- **FCSS RGs published as final**
 - **RG 3.16**
 - General Fire Protection Guide for Plutonium Processing and Fuel Fabrication Plants - April 2009
 - **RG 3.25**
 - Standard Format and Content of Safety Analysis Reports for Uranium Enrichment Facilities - December 2008
 - **RG 3.52**
 - Standard Format for Health and Safety Sections of License Renewal for Uranium Processing and Fuel Fabrication - May 2009

Questions



**Office of Nuclear Material Safety and
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Revision to Standard Review Plan for
the Review of a License Application for
a Fuel Cycle Facility

NUREG 1520, Revision 1

NUREG 1520 Revision

- Effort was focused on improving both the clarity, and also consistency with the Agency positions that support compliance with current regulations.
- No new staff positions

Process for Revision

- Staff interdisciplinary working group formed
 - Technical experts in from a number of areas (i.e., criticality, chemical, fire, environmental, quality assurance, integrated safety analysis, radiation protection)
- Solicit input from peers and incorporate Interim Staff Guidance
- Revise and submit for peer review
- Draft Revision Publicly available
- Public Meeting
- Public Comment period... request for extension granted
- Public Comments addressed revised draft made publicly available
- Met with ACRS Subcommittee and full committee.. Approval for issuance of revision

SRP Changes

- Improve linkage of review content to regulatory requirements
- Incorporate Interim Staff Guidance positions and update references
- Incorporate Lessons Learned from licensing experience and provide technical clarifications
- Added a new subsection: “Review Interfaces”
- Reformatting of chapters for consistency with NUREG format
- Added additional guidance,, clarification, and references for meeting regulatory requirements
- Removal of redundant and vague guidance, non-requirements and commitments to follow the regulations

Chapter 3: ISA & ISA Summary

- New Appendices incorporate ISGs as previously published:
 - Annex to Appendix A: Use of Appendix A Risk Index Methodology
 - Appendix B: Qualitative Criteria for Evaluation of Likelihood (ISG-1)
 - Appendix C: Initiating Event Frequency (ISG-9)
 - Appendix D: Natural Phenomena Hazards (ISG-8)
 - Annex to Appendix D: Example of Natural Phenomena Hazard Review for Compliance with 10 CFR 70.61.

ACRS Conclusions and Recommendations

- NUREG 1520 Rev 1 should be issued
- Staff should continue to move in the direction of risk-informed regulations using analytic techniques and terminology consistent with other agency applications
- Attention should be given to activities for:
 - Treatment of Safety/Security Interface
 - Assessment of chemical hazards, including accident sequences that result in injuries as well as fatalities
 - Fire induced “hot shorts” and their potential to place systems in conditions other than a fail-safe condition



Questions are welcome!