

POICY ISSUE (Information)

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SECY-04-0144

FOR: The Commissioners

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SUBJECT: MAINTAINING A CURRENT AND EFFECTIVE SET OF REACTOR GUIDANCE DOCUMENTS

PURPOSE:

To convey to the Commission the status, approach and plans for maintaining current and effective reactor guidance documents for staff and applicant use as requested in a staff requirements memorandum (SRM) dated October 31, 2003.

BACKGROUND:

On Thursday, October 2, 2003, the Advisory Committee on Reactor Safeguards (ACRS) briefed the Commission on several topics, and the Commission subsequently issued the above noted SRM. The second item in that SRM directed the staff to provide the Commission the status, approach, and plans for maintaining a current and effective set of guidance documents for staff and applicant use. It also directed the staff to identify priority and resource considerations in this area

DISCUSSION:

The subject SRM referred to "guidance documents" in general, and cited "regulatory guides, standard review plans, and review standards." In addition, the discussion during the Commission briefing on October 2, 2003, specifically noted the industry consensus standards

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developed by the Institute of Electrical and Electronics Engineers and The American Society of Mechanical Engineers as examples of the references cited in guidance documents promulgated by the Nuclear Regulatory Commission (NRC) that may have become obsolete over time.

Within the NRC, the Office of Nuclear Reactor Regulation (NRR) and Office of Nuclear Regulatory Research (RES) are responsible for issuing the type of reactor technology-related guidance documents specified in the SRM; RES is responsible for regulatory guides and NRR is responsible for the SRP and other reactor licensing guidance documents. The Office of the General Counsel (OGC) provides legal support to ensure that the guidance documents are consistent with the relevant requirements of NRC regulations and Federal statutes. It should be noted that this paper does not include input from the Office of Nuclear Material Safety and Safeguards (NMSS), because it focuses exclusively on NRC documents related to reactor licensing and reactor technology.

The offices have evaluated the guidance documents for which they are responsible and have developed plans to update out-of-date documents. In particular the offices have developed plans for the resources needed to update consensus standard references in existing regulatory guides and for a complete update of review guidance, including consensus standards references, for the “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants” (NUREG-0800); Review Standards, “Environmental Standard Review Plan”, NUREG-1555); and “Guidelines for Preparing and Reviewing Applications for the Licensing of Research and Test Reactors” (NUREG-1537).

Updating and maintaining the referenced guidance documents supports the NRC strategic plan goals of Safety, Openness and Effectiveness. Maintaining current guidance documents helps NRC achieve its safety goal by providing staff guidance to licensee individuals and organizations for the use of radioactive materials for beneficial civilian purposes, and then ensuring that the performance of these licensees is at or above acceptable safety levels. In particular, these guidance documents help NRC maintain vigilance over safety performance through ongoing licensing reviews and inspections, and expanded oversight.

These guidance documents facilitate sharing information, resources, best practices, and lessons learned from operating experience and influence the development of both domestic and international standards and guidance consistent with U.S. objectives as well as help NRC maintain trained inspectors, license reviewers, and researchers.

The up-dated guidance documents will help the agency to become more effective, efficient, realistic, and timely in its regulatory activities.

The discussion below summarizes the resource estimates for updating the guidance documents discussed above while the attachments to this Paper provide more detailed descriptions of the development of the staff's plans.

On the basis of its evaluation, the staff estimated the resources required to update 110 existing regulatory guides that endorse consensus codes and standards and another 19 that endorse a mixture of codes/standards and staff positions. Specifically, the staff determined that updating these two groups of regulatory guides will require 22 full-time equivalents (1 FTE for every 5 guides) for those that endorse only codes and standards, and another 6.3 FTE (1 FTE for every 3 guides) for those that endorse a mixture of codes/standards and staff positions. The

staff further estimates that legal support by OGC will require 2.2 FTE (.1 FTE for every 5 guides) for those guides that endorse only codes and standards, and another 0.63 FTE (.1 FTE for every 3 guides) for those guides that endorse a mixture of codes/standards and staff positions.

The staff estimates that updating the entire SRP (including developing several new review sections of NUREG-0800) will require approximately 35 FTE. (This estimate does not include resources that may be needed to address any potential policy issues; however, it does include resources for a complete update of the SRP including references to consensus Codes and Standards.) The staff further estimates that related legal support provided by OGC will require approximately 3.5 FTE. Additional staff resources (on the order of 2-3 FTE per year) will be needed for routine maintenance of the SRP sections after they are updated while the related OGC legal support for routine maintenance will require 0.2 FTE per year. The review standards will be reviewed periodically and revised as required. Revisions to NUREG-1555 will be considered in conjunction with the planned update to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," which is on a 10-year update cycle. Also, a detailed staff review and revision to NUREG-1537 is being considered and the staff estimates it will take approximately 0.4 FTE.

CONCLUSION:

The staff has estimated the resources needed to update the existing reactor licensing guidance documents and to acquire the necessary OGC legal support for those updates. The staff will update these documents with resources made available for this activity in Commission-approved budgets. Toward that end, future budget requests will include some amount of resources for these updates. Additional resource requirements (if any) will be evaluated using the Planning, Budgeting, and Performance Management process.

The staff has not completed its estimate of the resources required to continuously "maintain current and effective reactor guidance documents." However as can be seen from the estimates discussed in this paper, continuously revising guidance documents solely to update references to consensus codes and standards would be resource intensive.

COORDINATION:

OGC has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer has also reviewed this paper for resource implications and has no objections.

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Attachments:

1. Updating Regulatory Guides
2. Updating Standard Review Plans

UPDATING REGULATORY GUIDES

The U. S. Nuclear Regulatory Commission (NRC), Office of Nuclear Regulatory Research (RES) established a regulatory guide review team (RGRT) to review and categorize existing regulatory guides in all 10 divisions of the NRC Regulatory Guide Series. In general, regulatory guides describe acceptable methods that licensees can use to implement and demonstrate compliance with specific parts of the Commission's regulations, as well as the techniques that the staff uses to evaluate specific problems or postulated accidents and the data that the staff needs to review applications for permits or licenses. Within that broad description, the guides are grouped into 10 divisions, which focus on (1) power reactors, (2) research and test reactors, (3) fuels and materials facilities, (4) environmental and siting, (5) materials and plant protection, (6) products, (7) transportation, (8) occupational health, (9) antitrust and financial review, and (10) general guidance.

On the basis of its review, the RGRT determined that 34 of the 352 existing regulatory guides do not require any action at this time because they have been withdrawn or recently issued. The RGRT reviewed and categorized the remaining 318 existing regulatory guides based on the types of documents that they reference and endorse, as follows:

- codes and standards
- staff positions
- industry technical papers
- two or more of the above

The RGRT also prioritized the existing regulatory guides (as high-, medium-, or low-priority) based on the following criteria:

- Is there an existing user need request for the regulatory guide?
- Is there a need for the regulatory guide in a current licensing activity but no formal user need?
- How much time has elapsed since the last update of the regulatory guide?

Regulatory guides meeting the first prioritization criterion and that have not been updated for at least 10 years received a high rating; a medium rating was assigned to a regulatory guide if it had been updated within the last 5 years; a low rating was assigned to a regulatory guide if it had been updated within the last 3 years or if there was no regulatory concern associated with the guide.

The results of this prioritization are shown in the table below:

Table 1 - REGULATORY GUIDE PRIORITIZATION

Priority	Staff Position	Endorsement of Code & Standard	Mixture	<u>TOTAL</u>
High	28	5	6	39
Medium	19	21	4	44
Low	142	84	9	235
<u>TOTAL</u>	189	110	19	318

The RGRT then estimated the resources required to update the 110 existing regulatory guides that endorse consensus codes and standards and another 19 that endorse a mixture of codes/standards and staff positions. Specifically, the RGRT determined that updating these two groups of regulatory guides will require 22 full-time equivalents (1 FTE for every 5 guides) for those that endorse only codes and standards, and another 6.3 FTE (1 FTE for every 3 guides) for those that endorse a mixture of codes/standards and staff positions. The staff further estimates that legal support provided by the NRC's Office of the General Council (OGC) will require 2.2 FTE (0.1 FTE for every 5 guides) for those guides that endorse only codes and standards, and another 0.63 FTE (0.1 FTE for every 3 guides) for those guides that endorse a mixture of codes/standards and staff positions.

The difference in these resource estimates derives from the differences in complexity between regulatory guides that endorse only codes and standards and those that endorse a mixture of codes/standards and staff positions. On that basis, the RGRT assumed that one staff member can update five regulatory guides per year if those guides endorse only codes and standards, but would require additional time to update those that endorse a mixture of codes/standards and staff positions.

Resources were not estimated for updating the Regulatory Guides that solely contain one or more staff positions because the resource estimates for such guides must be performed on a guide specific basis due to the large variations in subject matter and technical complexity inherent in the guides.

UPDATING STANDARD REVIEW PLANS

NUREG-0800

Prior to the issuance of the subject SRM, the Nuclear Regulatory Commission (NRC), Office of Nuclear Reactor Regulation (NRR) had already begun preliminary work on a plan to update NUREG-0800 which sets forth the NRC's Standard Review Plan (SRP). Consequently, the NRR budget for FY 2004 includes a limited amount of resources (2.9 FTE) for the anticipated SRP updates. With this in mind, the staff determined that NRR had sufficient resources to begin establishing the approach and plan for updating and maintaining a current and effective SRP. Office management, therefore, instructed the staff to use the resources allocated in the FY 2004 budget to complete the following five tasks identified in the SRP update plan:

- (1) Assign an SRP Section Owner to each Section of the SRP.
- (2) Scope the degree of revision needed for each SRP Section.
- (3) Determine the resources needed to update each SRP section.
- (4) Prioritize the SRP sections for updating.
- (5) Issue NRR Office Instruction (OI) LIC-200, "Standard Review Plan Process," to provide guidance to accomplish the scoping reviews, and to update and maintain the SRP.

Based on those instructions, the staff assigned "owners" to each section of the SRP, and those section owners have performed the necessary scoping reviews to determine the degree of revision needed for each SRP section. Among other considerations, the scoping reviews identified the resources needed to ensure consistency between each SRP section and any related NRR-developed review standards. In addition, the section owners considered the following factors during the scoping review process:

- What version of the SRP is currently being used to conduct reviews?
- Has any supplemental guidance superseded the version of the SRP section that is currently being used to conduct reviews?
- Will the updated SRP section require feedback from the public, ACRS, or the Committee to Review Generic Requirements (CRGR)?
- Will updating the SRP section require updating additional guidance?
- What is the estimated number of hours required to update the SRP Section?

The staff then used the information collected during the scoping reviews to estimate the necessary resources. On that basis, the staff estimates that updating of the entire SRP (including developing several new review sections), will require approximately 35 FTE. (This estimate does not include any resources that may be needed to address any potential policy

issues). The staff further estimates that legal support provided by the NRC's Office of the General Counsel (OGC) will require approximately 3.5 FTE. Additional staff resources (on the order of 2-3 FTE per year) will be needed for routine maintenance of the SRP sections after they are updated, while the related OGC legal support for routine maintenance will require approximately 0.2 FTE per year.

The NRR staff has also completed its prioritization of the updates to the various SRP sections. In so doing, each responsible organization rated each SRP section in the following three categories:

- (1) Safety Significance
- (2) Recent Industry activity
- (3) Interest to the Commission and its Stakeholders

Additionally, the staff considered whether any SRP sections required immediate revision, and whether there was a need for any additional stand alone Review Standards. The staff did not identify any such requirements at this time. However, NRR will coordinate with the NRC's Office of Nuclear Regulatory Research (RES) to ensure that an SRP section and the regulatory guide(s) that it references will be updated on compatible schedules.

The staff then used the ratings for each of the three categories (listed above) to compile a prioritized list for each division within NRR. The office will use these prioritized lists to determine which SRP sections are scheduled to be updated in any given fiscal year. Toward that end, the highest-priority SRP sections will be updated as resources are allocated in the budget for updating the SRP. The specific resources for updating the SRP in each fiscal year will be provided during each year's budget process. For example, if the budget for a given year allocates 5 FTE for updating the SRP, the highest-priority SRP sections will be designated for updates in that fiscal year. Available resources will be used to update the SRP sections in the order of their priority ratings. Once sections are updated, NRR will need to allocate the necessary resources for maintenance.

It should be noted that in the past, infrastructure work, (such as maintenance of the SRP), has been of lower priority than other agency activities. Therefore, these activities were reduced first when budget reductions became necessary. Because 40 percent of NRR employees will be eligible for retirement by FY 2008 and approximately 23 percent of NRR employees have less than 5 years of experience, updating and maintaining the SRP will receive a high priority in the future.

The staff will accomplish the required SRP updates and maintenance according to the roles and responsibilities outlined in NRR Office Instruction (OI) LIC-200, "Standard Review Plan (SRP) Process." This OI provides a current list of responsible SRP section owners, as well as guidance for updating, maintaining and using the SRP. The NRR staff is currently working to complete LIC-200. NRR initially issued the draft OI for the staff to use and provide comments before issuing a final version. NRR anticipates issuing the final version of this OI by the end of the third quarter of FY 2004.

NRR Review Standards

NRR has developed two review standards (RSs), for extended power uprates (RS-001) and processing applications for early site permits (RS-002). The staff will periodically review these standards as required. The staff will also develop additional review standards as the need arises; however, NRR does not currently have plans to develop any additional review standards. The staff is considering alternative approaches for maintaining review standards and will address these alternatives in future revisions of LIC-200.

NUREG-1555

In 2000, the NRC issued NUREG-1555, Standard Review Plans for Environmental Reviews for Nuclear Power Plants," which subsumed NUREG-0555, "Environmental Standard Review Plans [ESRP] for the Environmental Review of Construction Permit Applications for Nuclear Power Plants." Volumes 1 and 2 to the ESRP have been incorporated into RS-002 and Supplement 1 provides guidance for environmental reviews associated with license renewal. The staff will consider revising Supplement 1 in conjunction with the planned update of NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," which is on a 10-year update cycle. For the current cycle, the staff began updating NUREG-1437 in 2003 and expects to finalize the update in 2006.

NUREG-1537

NUREG-1537, "Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors," provides guidance to Research and Test Reactor (RTR) licensees and applicants concerning the format and content for licensing actions. Specifically, these actions include construction permits and initial operating licenses, license renewals, amendments, conversions from highly enriched uranium to low-enriched uranium, decommissioning, and license termination. In addition, this report provides guidance for NRC staff who review RTR licensing applications.

The NRR staff is currently considering a detailed staff review and revision of NUREG-1537. The staff estimates that such an update will require approximately 0.4 FTE and \$200K.