

*Issue:* Chapter 5 (Operations) of the standard review plan has many editorial and technical discrepancies.

*Comment:* Several commenters identified editorial and technical concerns with Chapter 5 of the draft standard review plan. In some cases, the editorial problems may have made the regulatory guidance difficult to implement.

*Resolution:* The staff concurs with the commenters. Chapter 5 was rewritten to incorporate editorial and regulatory guidance improvements. The separate section on recordkeeping and reporting was combined with the section on the management control program to more closely match Regulatory Guide 3.46.1 (Standard Format and Content of License Applications, Including Environmental Reports, for *In Situ* Uranium Solution Mining). Editorial comments are not addressed individually in this comment summary document except where they have particular impact on the standard review plan.

*Issue:* Additional clarifying or background information should be included in NUREG-1569.

*Comment:* Several commenters suggested that specific additional information related to proceedings for a given site or that would provide general background information on *in situ* uranium extraction techniques and hazards be included.

*Resolution:* The NRC has elected not to include the suggested information in NUREG-1569 because the standard review plan is not written for application to a specific site, and general information is available in other references on *in situ* uranium extraction operations.

## 2. Policy Issues (Including Administrative, Quality Assurance, and Surety/Financial Issues)

*Issue:* NUREG-1569 attempts to apply a risk-informed, performance-based regulatory philosophy without a regulatory basis for doing so.

*Comment:* Commenters, while noting that risk-informed, performance-based regulatory philosophies could be applied to *in situ* leach uranium extraction facilities, argued that no regulatory basis exists for implementing such philosophies. The commenters stated that 10 CFR part 40 should be modified to incorporate risk-informed, performance-based regulatory concepts before the associated standard review plan is modified in that way, because standard review plans are not to be used to promulgate regulatory policy. Commenters also stated that the NRC should not expect license applicants to

conduct the accident analyses, consequence evaluations, and probability determinations associated with risk-informed, performance-based regulation. Finally, the commenters argued that the risk-informed, performance-based approach presented in NUREG-1569 was too cursory, contained undefined terms, assumed the existence of a facility change mechanism, and that the review plan contained highly prescriptive acceptance criteria.

*Response:* The NRC agrees that standard review plans cannot be used to promulgate regulatory requirements, and has no intent to do so using NUREG-1569. In related action, the Commission considered promulgating a new regulation (10 CFR part 41) that would specifically address regulatory requirements for *in situ* leach uranium extraction facilities and that would formally incorporate risk-informed, performance-based regulatory philosophies. However, considering feedback from the uranium extraction industry and other stakeholders, and taking into account the economic status of the uranium extraction industry which would have to bear the cost of the rulemaking, the Commission determined that rulemaking was not an appropriate action at this time. Instead, in making this decision, the Commission directed the staff to update its regulatory guidance related to *in situ* leach uranium extraction facilities. NUREG-1569 incorporates this direction from the Commission. It outlines risk-informed, performance-based approaches that staff reviewers may apply to *in situ* leach uranium extraction facilities that are also consistent with existing NRC regulations at 10 CFR part 40.

In NUREG/CR-6733 (A Baseline Risk-Informed, Performance-Based Approach for *In Situ* Leach Uranium Extraction Licensees) staff analyses of *in situ* leach uranium extraction facility operations and accidents that consider both likelihood of occurrence and consequence (and therefore, risk) are presented. The analyses in NUREG-6733 are conservative and demonstrate that *in situ* leach uranium extraction facilities operated with properly trained workers and effective emergency response procedures generally pose low levels of radiologic risk. The staff considers analyses similar to, or based on, those in NUREG-6733 to be an appropriate basis for licensee safety analyses. NUREG-1569 is not intended to require applicants to prepare complex accident analyses, consequence evaluations, and probability determinations. However, site-specific

conditions and circumstances must be addressed in any application.

For several years, the NRC staff has been approving *in situ* leach uranium extraction facility license renewals that incorporate a performance-based license condition that provides a facility change mechanism using a Safety and Environmental Review Panel. This accepted practice is continued in NUREG-1569.

Finally, the staff has not attempted to implement overly prescriptive acceptance criteria in NUREG-1569. Rather, standard practices that have been found acceptable in demonstrating compliance at *in situ* leach uranium extraction facilities have been placed in the standard review plan as one approach that the staff may use in determining compliance. Other approaches may be found acceptable as long as the staff can determine that such approaches comply with applicable regulations. In addition, the introduction to 10 CFR part 40, Appendix A, allows applicants to propose alternative standards to the specific requirements in the Appendix A to demonstrate compliance, and the staff will review any such alternative standards that are submitted.

NUREG-1569 has been edited to remove inconsistent use of terms or undefined terms. Where useful, acceptance criteria have been modified to be less prescriptive. However, risk-informed, performance-based approaches to determining compliance have been incorporated in the standard review plan to the extent consistent with existing regulations.

*Issue:* Standard review plan guidance with respect to overlapping jurisdiction is not adequate.

*Comment:* Commenters were concerned that NUREG-1569 did not provide sufficiently clear guidance on coordinating license application reviews with federal and state agencies. Commenters also stated that the NRC should accept state guidelines in conducting reviews.

*Response:* NUREG-1569 implements Commission direction in SECY-99-013 regarding ground-water issues at *in situ* leach uranium extraction facilities. While this direction requires the staff to determine the extent to which it can rely on the U.S. Environmental Protection Agency's (EPA) Underground Injection Control program and to work to implement agreements with appropriate states on these issues, it does not suggest that the NRC broadly accept state guidelines. As appropriate, minimizing dual regulation and implementing agreements with affected states remains an objective of the NRC,