ISSUES TO BE RESOLVED FOR THE SUCCESSFUL IMPLEMENTATION OF THE NWPA -- REGULATORY VIEWPOINT

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ABSTRACT

This paper presents the regulatory perspective on issues to be resolved for the successful implementation of the Nuclear Waste Policy Act of 1982 (NWPA). From the regulatory viewpoint, the key issues are achieving credibility and efficiency in the licensing process. This paper will first present a discussion of some of the challenges that we face in licensing a high-level waste repository system and then will provide some examples of ways in which we at NRC are trying to make the licensing process credible and efficient -- credible in terms of scientific objectivity, a clear decisionmaking rationale and an acceptable public participation process and efficient in terms of addressing all of the key safety issues early on and streamlining the licensing process so as to meet the statutory time frame for licensing.

THE REGULATORY CHALLENGES

A fundamental challenge confronting the nation today is how to bring together the knowledge and beliefs of the public, the technical community, and the government in arriving at an acceptable integrated solution to permanent nuclear waste disposal. Our experience thus far in working toward the objectives of the Nuclear Waste Policy Act (NWPA) has proven that the entire nuclear waste disposal issue, particularly the current process for establishing disposal sites, is one of the emotionally-charged issues facing the nation today. Whatever final waste disposal site and design is selected by the Department of Energy (DOE), the ultimate debate during the licensing hearing, and most likely throughout the next several years, will be on the credibility of the national program.

Also presenting a challenge is the statutory timeframe for licensing a geologic repository system. The NWPA provides for a three-year (36 months) period for NRC to conduct its licensing proceeding to authorize repository construction (with a possible one-year extension upon Congressional notification by NRC). DOE, in its Draft Mission Plan Amendment of January 1987 has developed its schedule based on this 36-month period for licensing. Under NRC licensing procedures, the licensing proceeding must go through the steps of staff review of the DOE license application, preparation of a Safety Evaluation Report and environmental analysis, discovery, hearings, and Commission review and decision. The last 25 contested operating reactor licensing cases have averaged five years to complete. However, the environment of the licensing proceeding for constructing a high-level waste repository brings to bear the potential for a lengthier licensing proceeding. For example, the high-level waste repository is not only of regional and local significance, but national as well. The length of time required for performance of the repository system is 10,000 years, resulting in greater uncertainties. Therefore, the number of contested issues may be expected to be greater. For example, the Chairman of NRC's Atomic Safety and Licensing Board Panel (our Chief Administrative Judge) remarked that this is a "first time case that may well be the largest administrative proceeding ever conducted." He estimates that the number of fully-funded parties to the licensing hearing will be 10 to 30 times greater than that of reactor licensing cases and that the number of documents to be subject to the discovery phase will be about 30 to 40 times larger. Without employing strong innovative techniques and procedures to reduce the administrative burden of handling a licensing case of this magnitude, the three-year licensing timeframe may be a highly optimistic goal.

We are therefore faced with the need for some change in the way NRC has done things. As Manager for NRC's licensing program under the NWPA, I believe that NRC must take a much more pro-active approach to assure that the licensing process will be both credible and efficient. We cannot afford to react to DOE initiatives and hope that the licensing approach currently used for reactors will work for a waste disposal system.

ACHIEVING CREDIBILITY AND EFFICIENCY

What can we do to improve our chances for a successful licensing program -- one that is both credible and efficient? Let me summarize some of the pro-active measures that NRC is undertaking to help make the licensing process more credible and efficient.

First, we are building into our program the discipline called "systems engineering and integration." While we have a strong cadre of experts performing work in the various geoscience and engineering disciplines, a systematic and structured approach to bring together the many technical inputs

into a fully integrated and cohesive licensing position is essential. A first step will be the development of a formal "program architecture" which will display the entire NRC licensing program as it relates to each licensing finding. It will identify, as a minimum, the information and analyses needed by NRC to make each licensing finding, the interface points to be considered, and the NRC activities and schedules necessary to carry out our mission. The program architecture will be used by NRC decisionmakers as an aid in making judicious programmatic decisions and it will provide a formal, publicly documented structure for identifying the decisions made and their rationale. This overall program architecture will provide a strategic viewpoint of the licensing program and provide a clear framework to evaluate progress in reaching our program objectives.

Second, a major focus of our pre-licensing program is the early identification and resolution of potential technical licensing issues. Because of the many uncertainties involved and the number of possible issues, the licensing hearing could take years to complete unless some of the issues can be debated and resolved prior to the hearing. We are already identifying some of the key generic and site-specific issues through our pre-licensing consultations with affected parties, document reviews and staff technical positions. To formally resolve the issues prior to the licensing hearing and allow for full public participation in their resolution, we are evaluating the possibility of early rulemaking or "mini-hearings" on selected issues. However, these alternatives are resource-intensive and require long lead-times for resolution. Issues closed in these manners must be mature and important enough to make the investment of time and resources worthwhile. The NRC is in the process of identifying, on a systematic and continuing basis, issues that might be appropriate for resolution through rulemaking or hearing. For example, possibile issues include the methodology for demonstrating compliance with the EPA standard and waste package compliance. We intend to move toward early resolution of issues. Our approach to this will be clearly identified since its credibility is essential.

Third, we are developing a formal system for managing and tracking the disposition of licensing issues as they are identified throughout the pre-licensing process. Such a system will document each issue identified, as well as all key references to the issue, plans and approaches for resolving the issue, and whether and how it was resolved. Along with the system will be a process for evaluating the issue to determine whether it does in fact represent a significant licensing concern and how it fits into the program architecture. We are currently testing a pilot system using Nevada issues, but plan to expand the system so that it is fully operable for all three candidate sites within the next year or two. As with the program architecture, the system will be made publicly available so that anyone at any time can look at NRC's issues hierarchy and see whether and how the issues are being resolved.

Fourth, information management for this undertaking is massive. In the interest of efficiency, effectiveness and openness, the NRC and DOE are seeking to establish a single information base -- with easy public access -- that will contain the information pertinent to the licensing decision. This information base, which should be the most effective, proven system now available should provide many opportunities for improved efficiency, effectiveness and openness. For example, we are looking at ways to significantly change the licensing discovery process in order to make it more efficient. One of the most significant contributors to the length of NRC licensing proceedings is the time associated with sending, receiving, and handling information and data during the discovery phase. Current technology for electronic storage, retrieval, and mail could substantially reduce the time needed for information processing. With such technology, information and data could be made available to all interested parties through a central data base before the license application is submitted and formal NRC review begins. In this regard, NRC in concert with DOE is currently demonstrating a pilot program for electronic records storage and retrieval which could be used to facilitate the discovery phase. The actual storage and retrieval system, which is called the "Licensing Support System" will be the single licensing information base and will be funded by DOE. The system, once developed, would not involve the generation of new data, but, rather, would capture in electronic form all the data that would normally be generated relevant to the licensing decision. Ideally, all parties to the licensing proceeding would provide access to relevant data within their control by making it available in a standard electronic format for easy incorporation into a centralized computer data base. The compatible information and data would then be accessible to all interested parties. NRC proposes to implement this process through a negotiated rulemaking, which would involve representatives from all affected parties in developing the rule from the outset. This will be NRC's first experience with a negotiated rulemaking. If the process is successful, we may expand its use to the resolution of other issues.

Fifth, we are looking at options for developing NEPA review procedures and criteria. NEPA requires that the Commission prepare an Environmental Impact Statement (EIS) for any major federal action. However, under the NWPA, the NRC is to adopt "to the extent practicable" any EIS prepared in connection with a repository proposed to be constructed by DOE. We are thus faced with the task of developing an approach that will balance the clear mandate of Congress to avoid duplication of work (and expenditure of public resources) with the independent NEPA responsibilities of the Commission. An approach being considered is that NRC would conduct a review of the DOE EIS and identify specific environmental issues addressed in the EIS which would be adopted and would not be subject to challenge or change during NRC review. Traditional NRC practice would be followed as to environmental issues that the Commission did not adopt, i.e., independent analysis of those issues by the Commission and litigation of those issues in the licensing proceeding. However, the criteria the Commission would use to determine which portions of the EIS to adopt and the process for adopting those portions still need to be developed. We are addressing these issues now and plan to conduct a proposed rulemaking identifying the procedures and criteria. Whatever procedures and criteria are implemented, it is important that we achieve the proper balance between resource efficiency and public participation.

And, finally, we are looking at alternative licensing approaches that may reduce the period of time for litigation once a complete license application has been filed. One alternative we are looking at is the rendering of partial initial decisions on issues that are not dependent on others and that are relatively mature for early resolution. Issues pertaining to the waste package or the environmental impact statement are examples of possible issues that could be segmented from the entire application. Another alternative we are looking at is the creation of multiple licensing boards under the direction of a "managing board." Each licensing board would decide different issues, and the "managing board" would have primary responsibility for the final initial decision and for the entire case. This approach would complement the use of partial initial decisions in that it would allow for simultaneous addressing of the issues, which would then be integrated into the final decision by the managing board.

CONCLUSION

Some of the efforts I have just described have already been initiated, such as the systems engineering program, the management and tracking of potential licensing issues, and the licensing support system to facilitate the discovery process. These efforts will not only help in increasing efficiency, but will help the credibility of our program by documenting and making publicly available the information leading to NRC decisions. These efforts, along with early rulemaking on selected issues, will also involve the public to a greater extent in our decisionmaking process. The remaining streamlining efforts described, such as the NEPA review process, partial initial decisions, and multiple licensing boards still require more detailed analyses by our legal staff, but they are indicative of our current thinking in terms of streamlining the licensing process.

In closing, I want to reiterate the NRC's commitment to assuring that the licensing process is both credible and efficient. I want to emphasize, however, that our intent in process will not overshadow our primary mission -- to assure that any site that is licensed is technically current and will meet the technical criteria with reasonable assurance. Although we will strive for a procedurally streamlined process, safety and public protection is our ultimate and overriding goal.

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