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WM Project 1  
Docket No. \_\_\_\_\_  
PDR

March 20, 1987

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Commissioner James K. Asselstine  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

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Reference: Recommended Safety, Reliability, Quality Assurance and Management Aerospace Techniques With Possible Application by the DOE to the High-Level Radioactive Waste Repository Program, NUREG/CR-4271, enclosure 1.

Dear Mr. Asselstine,

After reading a release of the remarks that you presented at the recent ASQC's Second Topical Conference on Nuclear Waste Management and Quality Assurance, I felt inclined to offer a few thoughts to you that are closely related to two of the main topics of your remarks. These topics are the repository licensing process and quality assurance.

During preparation of the reference for the NRC, I remembered some of the problems I had observed with the licensing process that had been applied to Three Mile Island-2 and to Shoreham. To provide a better licensing process, I applied aerospace/NASA experience to develop a special subsection of the reference document entitled "NRC Licensing Interface", pages 81-82. Further development of the ideas behind a better licensing process occurred as I presented the completed reference to the NRC, the DOE OCRWM, and the three major OCRWM field offices. Additional development occurred as I generated some internal quality assurance procedures for the NRC's Division of Waste Management, and, later, as I assessed ways to improve the performance of the OCRWM's Salt Repository Project Office. Excerpts from the results of these additional activities are included as enclosures 2 and 3, respectively.

Application of this better licensing process, through long-term interaction between the NRC and the applicant, can be expected to dramatically improve the efficiency of the process by having the NRC and the applicant identifying the problems, including the key technical issues, at times when the most knowledgeable resources are available to resolve them. It will also result in the production of accurate and current documentation at those times when the applicant and the NRC have specifically agreed on the content and the unanswered/questionable technical issues that remained. This interaction with the NRC will result in a high quality application and will encourage the DOE to take a critical approach to the entire process.

With other interactions, as identified in this better licensing process and as accomplished to a more limited extent in the NASA experience, differences among the various federal agencies with responsibilities for the repository program will be identified early and worked with the opportunity for full coordination and, as noted above, at times when the most knowledgeable resources

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are available. Likewise, with suitable and consistently arranged interactions, potential problems with the scientific community, the host states, the affected Indian tribes, and the public can be identified early and worked under the most favorable conditions during the licensing process. Such interactions are expected to significantly reduce the extent of the on-the-record adjudication activity that is now expected.

The reference, pages 56-60, and the subsequent work identified and developed a technique, patterned after some other NASA and earlier NACA experience, of ameliorating anticipated problems with the scientific community and for bridging the missing QA for data and information. The principal part of this technique has been identified as the "super peer review" in this work. It is intended that this technique supplement the interaction with the scientific community in order to provide the "best shot" at the weakest link in the repository program.

Furthermore, the reference and the subsequent work provides for an integral and active role for quality assurance in the licensing process and in the supporting techniques included in the reference. The prescribed role satisfies the recommendations of NUREG 1055 (Ford Amendment) that are applicable to the repository program. Such participation of quality assurance will provide an early identification and focus on so-called "QA problems" to prevent occurrences that arose embarrassingly late on nuclear power projects like Zimmer, Marble Hill, Midland, and more recently Comanche Peak.

Obviously, the foregoing discussion has only noted some of the benefits that can be achieved by melding experiences from other activities with your (and NRC) experiences and goals. It will be important, assuming that you are interested in what I have presented above, to learn more of the benefits and of the costs of gaining these benefits. I feel certain that some arrangements can be made for you to explore these experiences with me. Two NRC people who are most familiar with the work that I performed for the Division of Waste Management are Messrs. Joseph O. Bunting and Mark S. Delligatti. I have also communicated with your Mr. John Austin in order to put the techniques of the reference in perspective relative to the NASA Space Shuttle Challenger accident and relative to a set of comments about the contents of the reference that was generated within the DOE-OCRWM. To further acquaint you with my background, I have included, as enclosure 4, a brief resume.

It is also noted that much of the material in the reference document and most all that has been described above is also applicable to the NRC/nuclear power industry activity.

Sincerely,

William M. Bland, Jr., P.E.  
President

Enclosures: As noted.

cc: Mr. Joseph O. Bunting, w/o enclosures  
✓ Mr. Mark S. Delligatti, w/o enclosures

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