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# LOW-LEVEL RADIOACTIVE WASTE DISPOSAL IN THE U.S.

BY
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TO THE
LOW-LEVEL RADIOACTIVE WASTE FORUM
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Good morning ladies and gentlemen. It is a pleasure to be here in Annapolis this morning to meet with the Low-Level Radioactive Waste Forum. I welcome the opportunity to discuss with you some of the issues that are of concern to the Nuclear Regulatory Commission and to the state and compact officials who are responsible for the development of low-level radioactive waste disposal facilities. I was told prior to my visit today that your meetings are somewhat energetic -- but friendly. With that in mind, I am looking forward to a stimulating dialogue this morning on the low-level radioactive waste program in this country.

As you are all aware, the Low-Level Radioactive Waste Policy Amendments Act of 1985 clearly laid out the roles and responsibilities of the various parties involved in the management and disposal of low-level waste in this country. The NRC was charged with responsibilities under the Amendments Act and has, over the years, made every effort to comply with those requirements. The NRC has taken very seriously each of the provisions of the Amendments Act which involved the NRC, and has established a regulatory framework to contribute to the successful implementation of the Act.

We have had our successes. For example, we promulgated criteria for making emergency access determinations as specified in Section 6 of the Act. We also published technical guidance on alternative disposal techniques as required by Section 8 of the Act. Section 9 of the Act required that we develop a licensing review capability. The NRC has developed a number of guidance documents and conducted topical report reviews including the issuance of a standard review plan for low-level waste

facilities, a branch technical position on concentration averaging, and the review of a topical report on high-integrity containers. Of course, no discussion would be complete without mentioning our failed attempt at a policy to define quantities of radioactive material that are "Below Regulatory Concern" -- the NRC's attempt at complying with Section 10 of the Act. The Commission continues to pursue the decommissioning rulemaking in an effort to define quantities of material that pose minimal risk.

During my tenure as Chairman of the NRC, I plan to assure that NRC continues to support strong, consistent, and effective regulation of low-level radioactive waste disposal facilities in the U.S. At the same time, however, we must all recognize one certainty; and that is change. Change, particularly in the form of reduced resources, will most likely cause us to do business differently than we had in the past, and will clearly require us to be more efficient. This leads me to one topic that I would like to discuss with you today, and <u>that</u> is NRC's Strategic Assessment and Rebaselining.

## STRATEGIC ASSESSMENT AND REBASELINING

The environment in which the NRC conducts its activities is changing rapidly as a result of many influences, including budget constraints, a maturing nuclear power industry subject to the pressures of deregulation, and the potential for new and revised missions for the agency, to name a few.

Regulatory effectiveness requires that the agency continually reassess these changing conditions for both the reactor and materials programs. Only by being prepared for the challenges of a changing environment will the NRC be able to continue to keep its health and safety mission in sharp focus. It was with these challenges in mind that I initiated the Strategic Assessment and Rebaselining.

The Strategic Assessment and Rebaselining initiative has been divided into four broad phases that will be carried out sequentially with each phase building on the previous one. The first phase, which was completed in February, focussed on affirming our health and safety mission. It identified the sources of the mandates that make up our regulatory mission including relevant statutes, Executive Branch directives, and Commission decisions. It also examined over 4000 NRC activities to determine if each of those activities were being carried out in response to a specific mandate, or if an activity had some other rationale for its existence. In doing this, key strategic issues, questions, and decision-making points surfaced that will need to be addressed by the Commission. In the second phase, key

direction-setting issues were identified and options for issue resolution were outlined in issue (or option) papers. Most of these option papers have now been submitted to the Commission for its review. Once the Commission has made an initial assessment and prioritization of the issues, and has made preliminary decisions on many of the issues, public meetings will be held with various stakeholders on a number of the issue papers, including the types of organizations most of you represent, before final decisions are made.

Phases three and four -- strategic plan and performance plan formulation and implementation -- will address what our programmatic needs are and what resource levels should be assigned. I am firmly convinced that this comprehensive initiative will put the NRC in a better position to manage change effectively in the future.

## LOW-LEVEL WASTE DISPOSAL FACILITY DEVELOPMENT

Most of you probably are aware of a Commission paper (SECY-95-201) that was submitted to the Commission in August of last year. The paper addressed alternatives to terminating NRC's Low-Level Radioactive Waste Program. The options that were being considered were primarily a result of two factors: (1) the need for NRC to meet reduced staff and budget levels in the years ahead and (2) the unlikelihood that NRC would receive, in the near future, a license application from a non-Agreement State for a low-level radioactive waste disposal facility.

I felt that this was precisely the type of issue that needed to be considered in the broader context of NRC activities and therefore directed that the matter be considered as part of the Strategic Assessment and Rebaselining Initiative. Prior to sending the Commission paper to the Strategic Assessment and Rebaselining Steering Committee (Steering Committee), public comments were sought on the staff's proposals contained in this paper, and those comments were passed on to the Steering Committee.

The Strategic Assessment Team has identified NRC regulation of low-level waste as one of the key direction-setting issues. Now the Commission is considering what the role and scope of NRC's Low-Level Radioactive Waste Program should be in the overall scheme of other NRC activities. I would encourage you to be alert to the scheduling of the stakeholder meetings so that your views on this issue can be voiced and seriously considered.

Before moving on to another topic, I might make a side note. During the past year, I have visited many different types of nuclear facilities, including the Barnwell disposal facility.

One common thread that I observed was the keen interest of nuclear facility operators and nuclear product manufacturers in reducing low-level waste volumes. I saw first-hand new cleaning techniques for reactor piping that used material that was amenable to compaction, and reactor filters that were made of materials that could be incinerated. These techniques aimed at addressing waste compaction can affect the lifetime of a disposal facility.

## EXTERNAL REGULATION OF DOE

Another topic that might interest you is the possible external regulation of DOE by the NRC. In 1995, the DOE created an Advisory Committee on External Regulation. In its report, which was published last December, the Committee recommended that DOE be regulated externally and named NRC as one of two potential safety regulators, the other being the Defense Nuclear Facilities Safety Board.

NRC already has some oversight responsibilities for certain DOE activities, most notably the licensing of a high-level radioactive waste repository and, as most of you in this meeting are aware, the greater than Class C disposal facility. The Energy Policy Act of 1992 created additional oversight responsibilities for NRC in the form of a certification process for the U.S. Enrichment Corporation (USEC) gaseous diffusion plants at Paducah and Portsmouth. We are currently evaluating the possibility of licensing future high-level waste vitrification facilities. Thus, we have some familiarity with oversight of DOE facilities and activities.

Many questions remain to be answered, and of course, Congress must address budget and, in some cases, implementing legislation before any type of additional NRC oversight of DOE facilities might occur. Legislative action does not appear likely at this time or in the near future. I do see a broad range of options that could be considered for the external regulation of DOE. First, DOE facilities should be categorized to separate out what are clearly defense-related or weapons complex facilities, which may require different oversight. Regulatory options for facilities subject to NRC oversight range from full licensing, inspection, and enforcement reviews of DOE facilities to technical assistance in the form of integrated safety assessments or probabilistic risk assessments, with enforcement actions carried out by another agency. Other options with respect to regulatory approaches range from licensing under existing NRC requirements to conducting more limited reviews of specific DOE facilities (similar to the certification process of the USEC diffusion plants). This kind of facility categorization with a

regulatory approach overlay is critical to determining what approaches to regulatory oversight of DOE facilities make sense.

In any event, the NRC has not actively pursued the added responsibilities that would result from regulating DOE activities. But I am confident that, given adequate resources and a reasonable time schedule to develop and initiate a regulatory program, the NRC would be up to the task, if asked.

## DEVELOPMENT OF LLW DISPOSAL SITES IN THE U.S.

Let me now turn to the siting process for low-level waste disposal facilities in the U.S. As I had mentioned earlier, I recently had the opportunity to visit the Barnwell facility in South Carolina. And before the end of the year, I intend to visit both the Hanford disposal site and the Envirocare facility. In my confirmation hearings before the U.S. Senate, I expressed my interest in and concern over nuclear waste disposal issues. After my first year as Chairman, my interest in these issues has not lessened.

I am comforted by the fact that we have a system in this country to dispose adequately, for the most part, of the low-level wastes being generated, at least in the near term. I am encouraged by the progress that is being made by the various states and compacts in siting a low-level radioactive waste disposal facility.

The recent release by Texas of an environmental and safety analysis and draft license for the proposed low-level radioactive waste disposal facility in Hudspeth County, Texas, is one example of the progress that is being made in the low-level waste siting program. The recent release by Pennsylvania of its Community Partnering Plan is another. These are just two of a number of examples of progress that I have seen in siting a low-level waste disposal facility in this country.

I would be remiss if I did not mention that last September I toured the Centre de l'Aube low-level waste disposal facility in France which has moved beyond the siting stage to a fully operational facility. Last month I returned from Japan where I again toured a modern, operating, low-level waste disposal facility at Rokkasho. So while in the U.S. we have made, and are making, progress toward the siting of low-level radioactive waste disposal facilities, we are lagging behind our international counterparts. We should not become complacent or satisfied with the accomplishments to date but should continue to push firmly ahead.

## WARD VALLEY

One final topic that I would like to touch upon is Ward Valley. I have followed the progress of the Ward Valley project since coming to the Commission (and even before that in my previous life). As all of you are aware, California is an Agreement State and as such has the authority, and indeed the responsibility, for conducting the licensing review and determining if a license should be issued for a low-level waste disposal facility.

In past reviews of the California Agreement State program the NRC staff concluded that California's low-level waste regulations are compatible with those of the NRC; that California has followed NRC licensing guidelines and the standard review plan for acceptance and review of the Ward Valley application; and that the California staff, advisory committees and supporting contractual staff are well qualified and capable of conducting a highly effective and thorough review of the application. The next review of the California Agreement State program is scheduled for October, 1996.

When called upon, the NRC staff has provided technical assistance to California. These technical assistance requests have ranged from looking at the potential for flooding and erosion, to groundwater flow and transport, to clarifying NRC's position on emergency access to low-level waste disposal facilities and estimating the amount of plutonium that is likely to be disposed of in the Ward Valley facility.

The Commission will continue to provide technical assistance to California when warranted and requested. I recognize that some of you have a sense of frustration with the length of the licensing process. That is understandable. But I would encourage you not to give up.

## CONCLUSION

In conclusion, I would again like to emphasize the importance that I place on the program for which you are responsible. Operational low-level radioactive waste disposal facilities are needed to close a significant part of the back end of the fuel cycle. Progress in this area must continue in order for nuclear power to remain a part of this country's energy mix. From what I have seen, progress is being made in the low-level waste program thanks to the efforts of people like you. I would like to pass on to you a message I continually make to those throughout the nuclear industry. First, do not become complacent with your past achievements and secondly, never rest. I would like to thank you again for inviting me to your meeting today and would be pleased to respond to any questions that you might have.