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Tel. 301-504-2240

REMARKS BY IVAN SELIN
CHAIRMAN, U. S. NUCLEAR REGULATORY COMMISSION
before the
LOW-LEVEL RADIOACTIVE WASTE FORUM
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THE FUTURE FOR LOW-LEVEL WASTE DISPOSAL ---
WHERE DO WE GO FROM HERE?

Good morning ladies and gentlemen. It is with a great deal of pleasure that I will address you today on the important topic of low-level radioactive waste disposal. I would like to use this occasion to instill a sense of a new beginning in you as you continue in your site development efforts.

But we start from continuity, not change. There is no reason to believe that the basic Federal policy of State responsibility for low-level waste will be changed. As you know, this policy is deeply ingrained in both the 1980 Low-Level Radioactive Waste Policy Act and the 1985 Low-Level Radioactive Waste Policy Amendments Act.

There are sensible people who say that a gloomy future is now unavoidable, that to continue to rely on the States to face up to and deal squarely with the problems of low-level waste disposal has proven unworkable. I believe that the strong efforts you have made, and will continue to make, will eventually succeed. But I recognize there are reasonable people who hold an opposing view. It is all too true that disposal site development efforts have been slowed or even stopped. Events over the past year in Illinois, in Nebraska, here in California, and elsewhere, have been real setbacks to development efforts. The picture ahead, at least for the near term, may seem uncertain.

In these circumstances it is very useful to consider all the positive events that have taken place in the last 10 years.

The trend toward lower waste volume has arrived at the point where current disposal requirements are only about half of what they were a few short years ago. And this trend will likely continue. Nuclear utilities and other generators are

implementing strong programs to minimize waste generation, to recycle where possible, and to decontaminate or reduce volume whenever it is feasible. The steep recent increases in disposal costs have, of course, strongly influenced this situation.

Also, the lawsuit brought by the State of New York, and Allegany and Cortland Counties, and the resulting U.S. Supreme Court decision, have at least cleared the air about title to low-level waste. More importantly, the Supreme Court upheld the constitutionality of State responsibility for low-level waste disposal capacity and waste compact exclusionary authority.

I am also encouraged to see the agreement reached between the Rocky Mountain and Northwest Compacts to allow Rocky Mountain waste to be disposed of at the Hanford site near Richland, Washington. More of these agreements are needed if we, as a nation, are to have fewer, and therefore more economically viable disposal sites.

Another positive development is the decision by South Carolina and the Southeast Compact Commission to allow continued access to the Barnwell site for most out-of compact generators through June of next year.

However, as of mid-1994 Barnwell will close to all out-of-compact waste. Assuming, for the sake of argument and perhaps optimistically, that the California site near Needles is open for business by that time, licensees in 23 of our 50 States will continue to have access to disposal sites. Licensees in the other 27 States, (plus the District of Columbia and Puerto Rico) generating some 62 percent of the nation's low-level waste, will likely have no option but storage. Furthermore, in 1996, we could temporarily face a situation where only the Hanford site remains open, and only for use by the States in the Northwest and Rocky Mountain Compacts.

Realistically, interim low-level radioactive waste storage will be widespread in the near future. It will very likely be the only option available to a substantial percentage of the waste generators among our nation's 24,000 radioactive material licensees, at least for a while, as it is for licensees in Michigan, which has had no disposal site access since November 1990.

The Commission has previously addressed the storage issue; we believe that on-site storage should only be allowed as a last

resort to disposal after January 1, 1996. In our view, storage can be performed safely to accommodate short-term operational requirements, but there are real, practical and safety limitations to the viability of storage as an option.

First, storage simply will not be available everywhere. Storage requires space, proper access control, and adequate recordkeeping. Second, it imposes additional burdens on the health physics and radiation protection staffs, and requires additional surveillance and monitoring. An ability to deal with an occasional mishap, such as a spill or leaking container is another prerequisite to a safe storage program.

Where necessary to continue operation, and where the costs are tolerable, many licensees are already preparing to manage their waste by storage despite the additional problems and costs. This is true of many nuclear reactor licensees, pharmaceutical manufacturers, universities and hospitals. In some cases new structures are being built, and in other cases existing buildings are being refurbished or modified as needed. The Commission will seek to maintain an awareness of storage activities in general, and will likely ask the NRC staff for some kind of periodic assessment to ensure that public health and safety is not being compromised.

Storage, as a strictly interim solution, can work. But storage alone is not enough. There must also be genuine confidence that disposal capacity will be available in the future. As experience has shown for high-level waste, storage alone will not be tolerated indefinitely. Eventually, every state that produces low-level waste must also arrange for its disposal in accordance with the LLRWPA.

Then what must be done to make real progress in site development efforts? To answer this question, consider the successful experiences of others. In Sweden, a country where a successful referendum called for nuclear power to be phased out by the year 2010, a low and intermediate-level waste disposal facility has been operating since 1988 and an interim spent fuel storage facility since 1985. France, has sited two low- and intermediate-level waste facilities with little local public controversy. The first facility reached capacity and was recently closed; the second facility was opened in 1992 after the French made their selection from more than 40 "volunteered" siting areas. In both countries there was a strong and successful effort to develop public confidence and support. The public was brought into the process, and the process was carried out in full public view. Concerned public citizens were recognized as stakeholders in the outcome, and were given a role in the decisionmaking.

The low-level waste site development programs pursued by the States and Compacts have also recognized that public support is essential to the siting of new facilities, and have provided for meaningful public participation. NRC experience has shown us that genuine public support demands that the public have equally genuine confidence in the trustworthiness and technical competence of its regulatory agencies. This is a lofty but attainable goal. But for waste disposal facilities, which typically offer little in the way of direct benefits to the locality where they are sited, there are other barriers to public support. For there to be widespread public support for low-level radioactive waste disposal facilities, I believe there must also be a widely-held conviction that providing new disposal capacity is in the best public and local interest.

Although it may be easy to see the need for public support, actually building it is another matter entirely. It can take years of painstaking, diligent effort, and even then can be crippled by relatively minor misjudgments.

The Illinois experience demonstrates that public support at the local level, by itself, is not enough. In that case, what appeared to be an acceptable site to the local population was rejected by the Illinois Siting Commission for technical reasons. This underscores the technical difficulties that must also be overcome by site developers.

While the Commission cannot participate in your efforts of a developmental or promotional nature, we will, however, continue to assist where we can within our proper regulatory role.

Our principal responsibility is to provide a clear and workable national regulatory framework that will ensure adequate protection of the public health and safety. We have continued to improve the regulatory basis for low-level waste disposal as needs have arisen, such as by the uniform manifest rulemaking which is on your agenda. We will continue to do so; but I think we can do more. Let me review with you where we stand now with some of the key regulatory issues we face, and where I think we are headed.

10 CFR Part 61

When 10 CFR Part 61 (NRC's low-level waste disposal regulation) was originally promulgated, shallow-land burial in open trenches was the state-of-the-art. Under proper siting and environmental conditions, that technique is perfectly acceptable.

However, a new generation of designs has evolved, based on highly engineered concrete structures and waste containers. Such designs can help to provide and sustain the physical isolation of

low-level waste; they can be employed under a wide range of environmental conditions. They can be placed at ground level, with or without an earthen cover, or below ground.

In response to this development, NRC issued a very significant proposed revision to 10 CFR Part 61 for comment last year which would clarify the applicability of the Part 61 performance objectives to all land disposal techniques, including above ground structures and mined cavities. The Commission intends to take action on a final rule early this year.

Another possibility would be to provide greater latitude for disposal concepts featuring, for example, greater reliance on institutional control, maintenance, and retrievability. We hear from some States that this could improve the level of public acceptance. This approach could be among the options that the staff presents to us in response to a recent Commission request for suggestions on how the NRC might advance the policy objectives of the LLRWPA. We would certainly appreciate your views on this matter.

Waste Storage

Another well-publicized Commission rulemaking addresses the prospect of heavy reliance on waste storage in the future. At Commission direction, the staff will soon issue proposed rule changes which reflect the Commission's position that on-site waste storage after January 1, 1996 should only be permitted as a last resort. This proposed rulemaking has been sent to the Federal Register.

Compatibility

The subject of compatibility of Agreement State regulations is frequently a controversial matter. It seems to be even more so with regard to regulations for low-level waste disposal.

For instance, the Commission issued an affirmative decision last week with regard to compatibility of the low-level waste disposal regulations of the Commonwealth of Pennsylvania. It was, however, based on specific factors in Pennsylvania. In reaching this decision we decided that we will deal with future compatibility issues involving Agreement State programs for low-level waste on a case-by-case basis.

In agreeing with the majority on this matter, I expressed my personal view that the Agreement States should have additional flexibility in regulating low-level waste disposal, in keeping with the unique additional responsibilities that the States have been assigned under the LLRWPA.

Orphan Wastes

Mixed waste and waste that is greater-than Class C represent special disposal and storage problems that the Commission is also continuing to address. We have worked with the Environmental Protection Agency for most of the last decade to lessen the difficulties inherent in the joint regulation of mixed waste, and will continue to do so. The foundation we have built with EPA in this area will, I believe, allow us to address future interagency issues with more ease.

The prospect that DOE will be able to provide for commercial mixed waste disposal in the future, in conjunction with meeting its own mixed waste disposal needs, is enticing. However, there are a multitude of institutional and technical difficulties to be overcome and the end result is by no means certain.

The experience to date with acceptance by DOE of greater-than Class C waste appears to bear this out. Here, even where there is definite Federal (DOE) responsibility to provide for disposal, a real solution is not yet at hand. DOE has pursued a three-phase strategy which includes interim storage capability in 1993, dedicated storage in 1997, and disposal in 2010 at the high-level waste repository at Yucca Mountain. The Commission will continue to work with DOE to expedite this process if possible.

Conclusion

In summary, I continue to believe that the problems in finding solutions to the low-level waste disposal needs of this country are far from insurmountable. Technology is available to site and safely operate facilities in almost any environment, and the necessary regulatory framework is in place. Waste volume for disposal now is only half of what it was 10 years ago, when three operating sites were more than sufficient. And, despite the headlines in Illinois and elsewhere, real progress has been made over the last year. As has happened overseas, in places where waste disposal concerns are just as strong as here in the United States, perseverance and a willingness to work with the public will eventually pay off.

The NRC is more than ready to do what we can to help, within the bounds of our proper regulatory role. I and the rest of my colleagues on the Commission are prepared to examine our own policies and requirements in an effort to remove unnecessary limitations to your success. In particular, we will consider opportunities for broadening the range of acceptable engineered facilities. For us to be fully responsive to your needs, we need to hear directly and clearly where you think there are

opportunities for us to improve the way we are doing our job. In this way, you can help us to help you.

To start this process anew, I am ready now to answer your questions.