

SAFE, RELIABLE, COST-EFFECTIVE DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTES:

PROGRESS IN CALIFORNIA AND THE ROLE OF RADIOACTIVE MATERIALS USERS

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ABSTRACT

In the past two years, substantial progress has been made toward the establishment of California's disposal facility for low-level radioactive wastes. The California process for establishing a disposal facility is straightforward: a private developer, US Ecology, Inc., operating under state regulation with the statutory designation of "license designee," is responsible for selecting the site, obtaining a license, operating, and eventually closing and decommissioning the disposal facility. California's diverse users of radioactive materials, working together as the California Radioactive Materials Management Forum (Cal Rad), have played an important role in fostering and assisting the state's response to the requirements of the federal Low-Level Radioactive Waste Policy Act. Cal Rad conducts legislative, regulatory, and public information programs in support of its goal of the timely development, in California, of a safe, reliable, cost-effective disposal facility for low-level radioactive wastes.

BACKGROUND

At Waste Management '85, Cal Rad reported on California's progress in responding to the requirements of the 1980 Low-Level Radioactive Waste Policy Act.(1) Our 1985 paper described the composition, organization, goals, and activities of Cal Rad, and the historical background of California's legislative response to the federal Act which culminated in the enactment, in 1983, of State Senate Bill 342, bipartisan, urgency legislation which mandated the development of a LLW disposal facility in California and established the process for developing that facility. Cal Rad was the sponsor of Senate Bill 342 and played an important role in the legislative process in shaping its provisions. To recapitulate: Senate Bill 342 called for the development of a LLW disposal facility by a private developer under state regulation. California has been an Agreement State since 1962, and Senate Bill 342 directed the California Department of Health Services, which is responsible for California's Agreement State program, to adopt regulations, consistent with 10 CFR 61, for the disposal of low-level wastes and also to adopt regulations for the selection of a "license designee" who would be responsible, under state regulation, for site selection and facility development, operation, and eventual closure and decommissioning. As of March, 1985, regulations had been adopted and the facility developer selection process started. Unfortunately, selection of a developer had been delayed pending the outcome of litigation to settle a dispute over the selection process.

RECENT DEVELOPMENTS

Selection of US Ecology as "License Designee"

Cal Rad was not a party to the litigation but did file a friend of the court brief in January, 1985 stressing the consequences to California's users of radioactive materials of a prolonged delay in developing new disposal capacity. Specifically, we urged the court to recognize that in addition to considerations

of equity among the various firms competing for the right to develop California's disposal facility, the radioactive materials users' need for a quick resolution of the dispute was also an important, even an overriding, consideration. The court's opinion, directing the Department of Health Services to resume the selection process, was made final in the fall of 1985; US Ecology became the license designee in December, 1985 with the right to develop California's disposal facility. Under the provisions of Senate Bill 342 and the Department of Health Services' regulations, US Ecology has posted a performance bond of \$1 million and pays the Department an annual license fee of \$250,000.

Progress Toward Selection of a Site for a Disposal Facility

US Ecology's site selection efforts have focused on hydrologically closed basins in the desert portions of three counties: Inyo, San Bernardino, and Riverside. Due to low annual rainfall, high evaporation rates, deep water tables, and low population density, there appear to be a number of technically excellent sites for a low-level waste disposal facility in the areas under study. To facilitate communications with the public and local officials, and to provide a meaningful way for the public and local officials to influence the process of site selection, US Ecology, with the assistance of the League of Women Voters, has established a unique public involvement program including a Citizens Advisory Committee. This committee is composed of representatives appointed by the Boards of Supervisors of the three counties and representatives of the League of Women Voters, the Sierra Club, the Native American Heritage Commission, and Cal Rad. Early this year, US Ecology will select three to five sites for characterization from among the sixteen areas now under review. Selection of a preferred site will take place in early 1988 with an application to be filed with the Department of Health Services that year. Cal Rad is hopeful that California's disposal facility will be licensed and operating in 1990. US Ecology's development efforts and public involvement program, including the work of the

Citizens Advisory Committee, are described in a paper being presented at another Session at Waste Management '87.(2)

Cal Rad believes that US Ecology's excellent progress to date and the support of several desert communities for establishment of a LLW disposal facility confirm the wisdom of the straightforward approach embodied in the legislation, Senate Bill 342, sponsored by Cal Rad in 1983: reliance on a private developer under state regulation. This legislation was carried by Senator Alfred E. Alquist (D-San Jose) and then-Assemblywoman, now Senator, Marian Bergeson (R-Newport Beach).

Cal Rad's Public Information and Education Program

Cal Rad's public information program consists of field inspections of federal and commercial radioactive waste disposal facilities in Nevada, public conferences, newsletters, and presentations to various interest groups. In order to better organize key components of this program, an affiliate organization was formed in 1984, the Western Forum for Education in the Safe Disposal of Low-Level Radioactive Wastes. The Western Forum has its own Directors and Program Manager, Gene Cramer of Southern California Edison Company, and serves the dual purposes of educating both the public and users of radioactive materials as to the facts about generation and disposal of low-level waste and each other's needs and requirements. While Cal Rad, through public conferences and presentations, has attempted to inform the public throughout the state of the important uses of radioactive materials and the need to develop a LLW disposal facility in California, the Western Forum has concentrated its informational efforts on two very important groups: citizens in less-populated desert areas near potential disposal sites and residents in the more heavily populated areas in the western portions of the counties in which the search for a site is focused. The public information program has evolved since it began in 1983 with a slide presentation and a traveling display using a 55 gallon drum, samples of radioactive waste materials, and photographs illustrating uses of radioactive materials and disposal of wastes. In 1984, field inspections commenced to the Nevada Test Site, operated by the U.S. Department of Energy, and US Ecology's commercial low-level waste disposal facility at Beatty, Nevada. These inspections afford an opportunity to see the ongoing federal low-level waste disposal operation and the site of a concluded experiment in high level waste disposal at the Nevada Test Site in addition to the commercial LLW disposal operations at Beatty. A newsletter was started with a circulation of 450 citizens and officials in the potentially affected areas. In December, Cal Rad and the League of Women Voters Southern California Regional Task Force cosponsored a public symposium in the City of San Bernardino, and the League used a small grant from Cal Rad to write and publish a booklet, "Disposing of Low-Level Radioactive Waste in California, A Guidebook for Citizen Participation."(3) In 1985 and 1986, the Western Forum published for trial use and comment a manual for reducing the volumes of medically produced low-level waste. Among those groups taking part in the Beatty inspection program were the Caltrans (California Department of Transportation) Eastern Desert Spill Response Team and the California Highway Patrol area commanders for the eastern desert. This year, the visits to US Ecology's facility at Beatty continue, and Cal Rad is beginning to work with groups in the more heavily populated areas (e.g., the cities of Riverside and San Bernardino) as US Ecology continues its public information efforts in the desert communities.

In all, about three hundred citizens and officials from eastern desert communities have taken advantage of the opportunity offered by Cal Rad, the Western Forum, and US Ecology to see first hand what a LLW disposal facility looks like. Because this cooperative effort with US Ecology began long before the company was selected as license designee, US Ecology's site selection work and community relations program have benefited from the existence of a group of knowledgeable people who live and work in just those areas where the search for a site is focused. The Citizens Advisory Committee includes among its members individuals who participated in both a Nevada field inspection and the December, 1984 San Bernardino symposium.

Cal Rad Supports a Compact with Arizona

In 1984, pursuant to a provision of Senate Bill 342, Governor George Deukmejian negotiated an interstate compact, as provided for in the federal Low-Level Radioactive Waste Policy Act, with then-Governor Bruce Babbitt of Arizona. The compact was promptly ratified by the Arizona legislature, but, despite the support of the California Senate, the State Assembly has not agreed to ratification. Ratification attempts in the last two legislative sessions have failed for several reasons. In 1985, the Assembly added a rider to the compact bill specifying the location of the disposal site on what appeared to be a political basis. This was unacceptable to the Governor and the Senate authors. Last year, a compact with South Dakota was proposed by one Assemblyman and was approved by the South Dakota legislature and by three committees in the California Assembly, but the bill died on the Assembly floor. This proposal seems to be at odds with the federal policy encouraging disposal of low-level wastes on a regional basis, and Congressman Morris Udall (D-Arizona), Chairman of the House Interior and Insular Affairs Committee and lead author of the Low-Level Radioactive Waste Policy Act, commented that the proposal for a California-South Dakota compact is "surely inconsistent with the spirit, if not the letter, of the federal Act." Mr. Udall has also commented unfavorably on a proposal for a compact between Arizona and South Dakota. Nevertheless, a compact between Arizona and South Dakota was ratified by their state legislatures and was transmitted to the Congress for consent by Governor Babbitt last December just before he left office.

Cal Rad hopes that the Congress will not move too quickly to ratify the proposed non-regional compact between Arizona and South Dakota. We continue to support the efforts of Governor Deukmejian's Administration to secure ratification of a compact with Arizona by the California Legislature. Such a compact would be fully consistent with the federal Act and in the best interests of both states.

Cal Rad's Views on Current Issues: "Mixed" Wastes and So-Called "Enhanced" Technology for Disposal

Cal Rad believes that the site and waste form criteria of 10 CFR 61 are more than adequate to assure safe disposal of "mixed" wastes. We were therefore disappointed that the Congress failed to incorporate a means for avoiding dual regulation of these wastes by the Environmental Protection Agency and the Nuclear Regulatory Commission in the Low-Level Radioactive Waste Policy Amendments Act of 1985. We hope that the two agencies will move quickly to reach agreement on a regulatory scheme for identifying and regulating these wastes that will minimize the problems of dual regulation.

The provisions of 10 CFR 61 were adopted by the NRC in 1982 following an extensive rulemaking. These regulations should provide a more than adequate framework for developing, operating, and closing a low-level waste disposal facility as well as providing for long-term care and maintenance. The ALARA principle is part of the Performance Standards of 10 CFR 61, so the requirement already exists in federal regulations to take what additional measures are reasonable and cost-effective to maintain radiation exposures and releases of radioactivity to the environment as low as is reasonably achievable. Nevertheless, a number of "alternative" techniques for disposing of low-level wastes are under consideration in some states and other forums with the choice of disposal technique often taking precedence over selection of the disposal site. The cost-effectiveness of these schemes seems dubious at best. The belief, sometimes expressed, that such techniques will allay public concerns about the hazards of radioactive wastes needs to be balanced against the possibility that making something appear more hazardous than it is may tend to excite rather than allay public fears.(4) A reasonable approach would be to select a site first following the criteria of 10 CFR 61 and then to consider what, if any, enhancements might be reasonable and cost-effective based upon the characteristics of the particular site.

CONCLUSION

A safe, reliable, cost-effective disposal facility for low-level wastes is being developed in California on a schedule consistent with federal milestones and pursuant to policies established by state and federal

law. The California process is straightforward and consistent with the Agreement State regulatory scheme that has been in place in California since 1962 and relies on a private developer, US Ecology, Inc., to develop a disposal facility under regulation by the California Department of Health Services. California's users of radioactive materials - hospitals, utilities, industries, universities, research organizations, and professional societies - working together as Cal Rad, will continue their support of the effort to develop a disposal facility for low-level wastes through legislative, regulatory, and public information programs.

REFERENCES

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3. A. FULLER, "Disposing of Low-Level Radioactive Waste in California, A Guidebook for Citizen Participation," The League of Women Voters Southern California Regional Task Force, December 1984.
4. J. COHEN and A. PASTERNAK, "Cost-Effectiveness for Improved Methods of Low-Level Radioactive Waste Disposal," Transactions of the American Nuclear Society, 53, 115, (1986).