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Annual Technical Progress Report:

"Legal, Political and Institutional Implications
of the Sea-Bed Program for Radioactive Waste Disposal"

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April 19, 1979

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I. Domestic political feasibility of sub-seabed disposal

A. Political trends in executive agencies and congressional committees

The overriding event of 1978 was the establishment by President Carter of an interagency task force (IRG) to formulate a recommended U.S. policy for radioactive waste management. Fourteen departments of the executive branch were represented in the IRG, which was chaired by the Department of Energy. By the end of 1978, the IRG was considering sub-seabed disposal as the leading option after mined repositories in various media; the overall technical approach was to consider mined repositories in three to five different geological environments for the first disposal facility, with other options to be considered as soon as they were shown to be technologically and economically feasible. Final assessment of the effects of the IRG on the sub-seabed disposal program will be completed in 1979.

Additional trends included (1) the continued fragmentation of control over energy, nuclear power and radioactive waste management matters in executive branch agencies, including the regulatory agencies, and congressional committees; (2) the inability of the President or executive branch to exert strong leadership over energy-related issues owing to, among other factors, the lack of public support and the continued assertion of congressional power over decision making in this area; (3) the increasing

complexity and difficulty of the tasks facing the regulatory agencies, which lack the resources (including basic scientific knowledge) to respond effectively; (4) the decreasing probability for effective coordination of federal, state and local decision making in nuclear power and radioactive waste management issues, especially in questions of siting and transportation and the issue of legal or political veto power for the states--this further complicates the first trend noted above; (5) growing pressure within the government and public to somehow solve the radioactive waste management problem--this pressure is tempered, however, by the desire by some to rely on the radioactive waste problem as a means to stop nuclear power and increasingly by others to make the future use of nuclear power contingent on meeting specific milestones in a waste management program; and (6) continued public support in numerous national polls for environmental protection as opposed to other objectives, such as producing energy--this trend seems to prevent increased public support for emphasis on alternative energy sources as problems with petroleum prices and availability multiply.

B. Important factors in the domestic political feasibility of sub-seabed disposal

The identification and specification of the factors most important to the domestic political feasibility of sub-seabed disposal is in a very preliminary stage. Some candidate factors include: (1) the number and nature of perceived (by the government and the public) alternative radioactive

disposal options for the United States, especially mined cavities in land-based formations; components of this factor include the comparative progress made in R, D & D programs on individual waste disposal options, the comparative levels of political and legal barriers faced by land-based and seabed disposal options, the question of how many disposal options to pursue into the demonstration stage, and the status of the international cooperative R & D program for sub-seabed disposal; (2) the response of the U.S. scientific and technological community to the seabed disposal program; (3) the response of the U.S. environmental community to the seabed program; and (4) the status of U.S. and other countries' nuclear nonproliferation policies, especially the progress on developing spent fuel storage, radioactive waste management and reprocessing facilities under some form of international arrangements.

II. International political feasibility of sub-seabed disposal

A. Applicable public policy and longer-term political trends are also being assessed for: (1) France, Britain, West Germany, Japan and other nations with major nuclear power programs; and (2) the International Atomic Energy Agency, the International Energy Agency, the Nuclear Energy Agency (OECD), and other international bodies with programs in nuclear energy. Particular attention is devoted to the longer-term task of analyzing the motives and constraints in related international agencies for future activities in sub-seabed disposal, especially for the implementation stage of any possible seabed program in the 1990s.

B. The major factors in the international political feasibility of sub-seabed disposal are also being identified and assessed. This task will be continued into the early 1980s.

III. International cooperative research program on sub-seabed disposal

Advice is provided on a continuing basis to the seabed program management concerning the international cooperative research program. This includes theoretical analysis, such as the basic conditions for success in developing international R & D programs, and more applied assessment of transnational political trends, such as the importance of positions adopted by nations participating in the international seabed program. Also important are: (1) the role of interested countries and international agencies which are not currently involved in the international research program on sub-seabed disposal; and (2) the relationships to emerging international cooperative ventures, such as those that may arise after the conclusion of the International Nuclear Fuel Cycle Evaluation in late 1979 and early 1980.

IV. Development of social scientific research program

Despite stringent budgetary limitations, the social scientific component of the sub-seabed disposal program has been broadened to include several researchers in the disciplines of economics, law and political science. Legal and political studies are conducted on both the domestic and international levels.