UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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:



IN THE MATTER OF

PROPOSED RULEMAKING ON THE STORAGE AND DISPOSAL OF NUCLEAR WASTE

PR-50-51 (44 FR-61372)

(Waste Confidence Rulemaking)

STATEMENT OF POSITION OF THE

STATE OF OHIO

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In its notice of proposed rulemaking in this proceeding the Commission has invited the participants to address three issues:

- (1) whether radioactive wastes from licensed facilities can be safely disposed off-site;
- (2) when will such off-site disposal be available; and
- (3) whether such wastes may be safely stored on-site until such off-site disposal or storage is available.

It is the position of the State of Ohio that these three questions are merely a part of a much larger question: in what manner should the Commission consider the nuclear waste issue when licensing each individual nuclear generating unit. Concerning this ultimate issue it is the State of Ohio's position that it is time for the Commission to adopt a realistic, rather than a philosophically idealistic, attitude and acknowledge that the licensing of a

nuclear power plant includes a determination that nuclear waste could be stored on-site for an indefinite period of time extending beyond the useful life of the facility. While the State acknowledges that it is possible to paint improbable scenarios such as envisioned in the Department of Energy's Statement of Position, the State strongly contends that it is time for the Nuclear Regulatory Commission to publicly recognize the reality of the situation, i.e., as a license is being granted for a nuclear generating unit there is no assurance as to when waste disposal facilities will be available and therefore indefinite on-site disposal must be accepted as part of the cost of nuclear power.

Ohio wishes to make one further statement by way of introduction. Ohio has been perplexed in its attempts to obtain clarification concerning what the Commission expected the Statements of Position to contain.* The continued references to the "hybird" nature of this proceeding and the assurances that the Commission will determine the future course of these proceedings after the statements of position have been filed and reviewed exacerbates this uncertainty. Thus the State wishes to indicate what it believes the State of Position represents. First, the State does not perceive the Statement to be a technical document which is to be treated as "evidence"

^{*} Transcript of Prehearing Conference, pp. 45-49.

in the judicial sense. Furthermore it is not an exhaustive attempt to collect all the authorities and expert opinions which support the position taken by Ohio. Rather it is Ohio's statement of opinion concerning the issues presented by the Commission and an expression of the manner in which Ohio believes the Commission should conduct its future licensing actions. With this in mind, the State will turn to a discussion of the three issues presented by the Commission.

I. CAN RADIOACTIVE WASTES FROM LICENSED FACILITIES BE SAFELY DISPOSED OFF-SITE?

In its Statement of Position DOE has answered this question in the affirmative. Chio views this first question as essentially a technical question which is beyond its limited expertise in the matter. For purposes of this Statement, however, Ohio is willing to assume that given an unlimited budget and no time constraints some form of safe waste disposal is technically possible. As will be subsequently discussed, the State of Ohio's concern is that various institutional problems render any attempt to forecast the date for the operation of such a technically feasible system to be little more than an attempt at clairvoyance without the benefit of a crystal ball.

II. WHEN WILL SUCH SAFE OFF-SITE DISPOSAL BE AVAILABLE?

DOE has answered this question by stating that disposal facilities will be available between 1996 and 2007 and that off-site storage will be available in 1983. Ohio believes that these dates for disposal are unrealistic and that off-site storage is inadvisable. Ohio believes that the only statement upon which the Commission can confidently rely is that the further in the future the target date for an operational repository is placed, the more likely it is that the date will be achieved. DOE's position, however, reflects a failure to understand the true nature and scope of the social and institutional impediments to disposal. As a result, the Department's schedule fails to realistically consider the potential for down which may result from unsuccessful attempts to deal with those problems. Furthermore, and of even greater importance, DOE fails to appreciate that the successful resolution of institutional concerns will probably result in delays because the resolution of the institutional problems probably will involve an accommodation of DOE's needs with those of other conflicting institutions.

Indeed DOE's analysis of institutional problems seems to consist of an assumption that since DOE is now aware of the problems, the problems are therefore solved. For instance, in Part III.C.2.2 DOE discusses its program to consult with the states. DOE's unspoken assumption is that since it has

decided to consult with the states, the state input will necessarily be consistent with DOE's unilateral determination to establish a repository by 1997. The "consultation" seems to be more of an effort to persuade the states to accept DOE's program needs as DOE has scheduled them than to incorporate the needs of the states into a waste management program that reflects the needs of a wide variety of interest groups and which may not be possible to implement by 1997.

An even greater flaw in DOE's approach, however, is its failure to adequately acknowledge the roles which numerous other entities will play in the process and to bound the potential for delay resulting from the inputs of the other entities. In essence DOE fails to acknowledge that its decision to implement a certain program by a certain date does not compel all of the other actors to accept that determination. At this point, therefore, it is appropriate to review the roles of the other institutional entities involved in the process of developing a mechanism for the safe disposal of nuclear wastes.

A. The President Of The United States

As the nation's Chief Executive, the President of the United States will obviously have a major role in the development of a safe method for nuclear waste disposal. Indeed, since DOE is a part of the Executive Branch, the Department must admit that the policy positions of a President will affect DOE's ability to implement its chosen program.

Yet there are numerous institutional uncertainties inherent in presidential input. First, and most obviously, is the fact that while there is not even a guarantee of continuity in the policy positions of a particular president, the likelihood that a succession of presidents will follow the same policy without interruption is quite small. President Carter is the first president to demonstrate a serious and on-going commitment to the resolution of the nuclear waste problem. His most recent efforts of February, 1980, establish a specific policy and process which he wishes to implement. Between now and 1997, however, there will be at least three, and possibly four or five, presidents. No one can seriously suggest that it is probable that each of these future presidents will feel themselves bound by the policy judgments reflected in President Carter's February, 1980, program. Indeed major policy shifts, such as Carter's indefinite deferment of reprocessing (including its resulting impact of the Commission's GESMO proceeding,, and the cancellation of the Waste Isolation Pilot Project cannot be treated as isolated occurrences but rather as examples of policy changes which will continue to take place in the future.

The second major uncertainty in presidential input is that it reflects only the judgment of one branch of government and cannot be successfully implemented without the concurrence of the other policy-making branch, Congress. No president can assure the Congressional acceptance of a program which will not be completely implemented until at least thirteen (13) years after

he leaves office. Indeed, while the President has developed a program which calls for extensive and formal input from the states, the Senate Energy Committee has reported out S.2189 which provides for no state input. Meanwhile, the House Science and Technology Committee has reported out H.R. 7418 which would even result in exempting repositories from NRC licensing. The Committee's action came despite testimony from DOE and the NRC opposing H.R. 7418. Finally, in order to fully appreciate the limits of a presidential policy decision, one need only recall Congress' action on President Carter's energy program.

Thus, there can be no doubt that the Presdient will have a significant role in developing a nuclear waste policy. Unfortunately, due to certain limitations in the institution of the presidency, that role may well prove to be a factor which delays rather than assists the timely implementation of a disposal program. Yet, no where in DOE's statement of position is there an attempt to bound the variables of this input upon DOE's desired schedule.

B. The Congress

As the controller of the purse strings and as the body which enacts laws, Congress has an obvious role in the timely implementation of a disposal program. Within the Congress itself, however, there is not yet any coherent consensus concerning the statutory framework for the implementation of the waste disposal program. Indeed, a vast spectrum of proposals have been submitted over the past few years including more than thirty (30) different pieces of proposed legislation. Furthermore, since the demise of the Joint Committee on Atomic Energy, there is no single body within the Congress assigned the task of developing such a consensus. In the House, the Science and Technology Committee, Commerce Committee and Interior Committee all have authority over some aspect of the issue. In the Senate there are also three different committees, Energy, Government Affairs, and Environment and Public Works, which are all working on different approaches to the problem.

In each of these committees in both bodies there is a wide range of approaches to the statutory mechanisms for implementing a repository or storage system. The proposals range from state veto programs to programs with state veto subject to Congressional or Presidential override to no state role at all. Furthermore the proposals vary depending upon the type of waste involved.

For its part, however, DOE in its Statement of Position totally disregards this political uncertainty. For DOE to come before this Commission and ask it to have confidence in DOE's implementation program without making any attempt to evaluate the feasibility of that program in light of Congressional indecision on the nature of the regulatory program is wholly incredible. But that is precisely what DOE has presented to the Commission.

C. The Numerous Departments And Agencies Involved In The Administrative Process

A third institutional force with which DOE's statement fails to adequately deal is the multiplicity of federal departments and agencies involved in the decisionmaking process.

These agencies present two problems: first, the agencies must perform their statutory functions in a timely manner; and second, there must be a careful effort to coordinate their efforts to assure timely implementation of a disposal program.

Concerning the first matter, the three key agencies are DOE, the Commission and U.S. EPA. None of these entities, however, has an impressive record for timely implementation of its programs. Indeed the date for the completion of the repository program under the AEC, ERDA, and now DOE has been repeatedly

set back.* EPA's overall radiation standards are the cornerstone of the joint efforts of DOE, NRC, and EPA. Yet EPA's reputation for failing to meet statutory deadlines under both the Clean Water Act and the Resource Conservation and Recovery Act, despite its good faith efforts to do so, are legendary.**

To confidently state that delays will no longer occur due to a failure of any of the agencies to meet their own timetables, is simply not realistic.

The composition of the Intergovernmental Review Group
("IRG") demonstrates the scope of the difficulty of coordinating
the efforts of a large number of governmental entities. In
addition to DOE, NRC, and EPA, the IRG included representatives
from the Department of Commerce, Office of Management and Budget,
Department of State, Department of Transportation, National
Aeronautics and Space Administration, National Science Council,
National Research Council, Office of Science and Technology,
Council on Environmental Quality and the Arms Control and
Disarmament Agency. In addition, the General Accounting Office
and the National Institute of Occupational Safety and Health
will probably have a role in the nuclear waste decision-making
process. While the actions of the IRG are a significant first

^{*} Previously the operational date for a repository had been estimated as 1983, then 1985, then 1988-1992, and now 1997.

^{**} EPA has not even come close to the mid-1978 date for issuing final radiation standards.

entities, there is hardly a basis in experience to conclude that the all future efforts will go smoothly and create no delay in the implement of DOE's proposed schedule. Indeed it is most likely that as the needs of each agency are worked into the process, they will be worked in because there will have to be some trade-off by DOE to accommodate the other entities. Thus the extent of the success of the efforts to coordinate the policy priorities of the other federal entities is probably a function of the flexibility of DOE's schedule.

Unlike the almost total omission of any discussion of the presidential and congressional roles, DOE's Statement of Position does reflect a knowledge and some degree of sensitivity to the problem of inter-agency coordination. The Department's Statement does not, however, provide the Commission with a basis to confidently conclude that the problem is being successfully handled. Rather Ohio believes the Commission must require from either DOE or from each federal entity an attempt to delineate the function of each entity and to bound the needs of each entity, the potential for policy changes within each entity and the amount of delay which could result to the federal effort from any problems incurred by any one entity. Only then can the Commission confidently conclude that a disposal system will be available by any fixed date.

D. The Role Of State And Local Governments.

As the awareness of a need for a nuclear waste repository has increased, there has been a commensurate increase in the need to involve state and local governments in the siting process in a meaningful way.

The necessity to integrate state and local concerns in the decision-making process on nuclear waste disposal is the result of hard lessons learned from past errors.* More recent experiences in Michigan and New Mexico confirm that DOE has not developed any mechanism which assures that state concerns will be satisfied.

Indeed, recent attempts to bring the states into the nuclear waste management process seem only to have resulted in the venting of long-held sentiments opposing the placement of nuclear wastes in most states. The NRC's Office of State Programs was created in 1976. In 1977, the DOE created an Office of Waste Isolation (OWI) located at Oak Ridge, Tennessee, to manage and centralize information on possible sites. In 1978, the OWI was moved to the Project Management Division of Eattelle Memorial Institute in Columbus, Ohio. One of the first actions of OWI was to send

^{*} A detailed history of those experiences is contained in Metlay, Daniel S., "History and Interpretation of Radio-active Waste Management In the United States", Essays on Issues Relevant to the Regulation of Radioactive Waste Management, NUREG-0412 (May, 1973).

letters to the governors of thirty-six states (including Ohio) describing the waste isolation program and how it affected their states. OWI described the research programs then in progress and essentially asked permission to continue its studies.

Reaction was varied, but was almost universally negative.

Only Nevada seemed interested in having a waste repository within its borders. Ohio asked OWI to discontinue its studies. Almost forty (40) state legislatures have either considered or taken some action concerning nuclear waste disposal.

As a result, DOE, President Carter and Congress have recognized that some mechanisms must be developed to institutionalize state input into nuclear waste management issues. The manner in which Congress will resolve this matter is, however, far from certain. As previously discussed, there are pending before Congress a wide variety of proposals for state involvement ranging from an absolute veto of a repository site to no voice at all. For DOE to ask the Commission to confidently rely upon its proposed schedule for implementing a repository program in the absence of Congressional action concerning the role of the states is totally unrealistic. While it is worthwhile to note that DOE finally recognizes the need to include the states, recognition of a problem is not the same as resolution of the matter.

Furthermore, no one has even begun to seriously address another issue of importance to some states which are under consideration as repository sites, i.e., the issue of compensation. Whichever state or states are selected for a repository, the siting of the repository will result in certain costs to the state or states. Land consumed by the repository will be removed from the public domain and the states' tax bases. Increased social service and security costs may follow. Will the federal government reimburse the state in which the site is selected for the resulting costs thereby reducing opposition to the outcome of the site selection process? At this time the answer to the question is mere conjecture.

The siting of nuclear waste disposal facilities is only one part of the problem. Numerous state and local governments have been involved in the regulation of the transportation of nuclear materials. These regulations have at times hindered the movement of nuclear materials and could easily effect the transportation corridors to repositories. Recently the Department of Transportation has proposed regulations which would effectively pre-empt inconsistent state and local regulations. There is every reason to believe, however, that these regulations will be challenged. The outcome of the struggle on this front is therefore far from certain.

Thus, while DOE's Statement recognizes the problem of institutionalizing state input, DOE makes no attempt to realistically evaluate the currently unsettled nature of this matter as a potential cause for delay in the implementation of its proposed program. As a result, DOE's statement fails to provide the Commission with a basis to confidently conclude that it can rely on DOE's proposal.

E. Pro And Anti-Nuclear Interest Groups.

It is an unfortunate but painfully true reality that nuclear waste disposal has been seized by anti-nuclear interest groups as a mechanism to delay the growth of, and perhaps even halt, the nuclear industry. As a result, pro-nuclear interests seem to be interested in a solution to the nuclear waste disposal puzzle at any cost. In addition, due to the emotionalism which plagues the nuclear debate and the long history of antagonism between the two sides of the issue, extremism and confrontation rather than moderation and reconcilation have been the main tactics employed by both sides.

The fact of the matter is that compromise is almost completely absent on both sides of the debate. But compromise is the critical element necessary in developing the societal consensus necessary to implement a long-term governmental program. As a result, reasonable attempts to develop a compromise program which addresses some of the concerns of all interested groups usually receive little support. For example, President Carter's February, 1980,

program is probably as reasonable an approach as anyone has suggested for developing institutional mechanisms which provide input into the repository development program for all interested groups. Yet the Administration's program does not seem to be moving on Capitol Hill while a lop-sided measure such as Representative McCormack's H.R. 7418, which goes so far as to effectively exempt repositories from NRC licensing, was reported out of committee within one month of its introduction. Similarly Ohio believes that a provision providing for some form of state veto of a repository site subject to presidential or congressional override may be appropriate, but any form of state veto seems unacceptable to nuclear and defense industry interests.

Thus, it seems clear that reasonable attempts to accommodate the many divergent interests in the disposal of nuclear waste will receive the support of few and the opposition of many.

DOE's Statement of Position, however, seems blissfully unaware of this reality. Instead the Statement seems to have been prepared in an ambiance of self-confidence that whatever DOE wishes to do can be accomplished without any serious opposition. Therefore DOE's Statement cannot be relied upon to provide the Commission with confidence that nuclear waste will be safely disposed by the dates proposed by DOE.

F. The Implementation Of An AwayFrom-Reactor Storage Program Will
Delay Efforts To Establish A
Repository Program In A Timely
Manner.

Despite the various institutional problems previously mentioned in this statement, there is one compelling factor which can contribute to the timely implementation of DOE's proposed system. That factor is a growing awareness at all levels of government that an answer to the nuclear waste disposal question must be developed soon or the entire role of nuclear power in the nation's energy policy could be eliminated. Thus, despite all the institutional problems previously mentioned, the pressing need for a waste disposal program is a strong incentive for the resolution of those problems. This incentive would be destroyed, however, by the implementation of the extensive AFR program proposed by DOE. Once the threat of nuclear power plant shutdowns is eliminated by the removal of the spent fuel from operating power plants to AFR's, the pressure will be off to find a permanent answer to the nuclear waste disposal problem. Instead the interminable debate among various options will continue.

The potential for a series of interim surface storage facilities such as AFR's to become <u>de facto</u> permanent facilities was noted several years ago by U.S. EPA in its evaluation of the AEC's Retrievable Surface Storage Facilitiy (RSSF). There is little difference in principle between DOE's AFR concept and the AEC's RSSF program.

The likelihood that the AFR's are an interim solution which, as a matter of convenience, could become a permanent solution, is increased due to numerous unresolved fuel cycle issues. Of primary significance is the nuclear industry's continued refusal to accept President Carter's decision to indefinitely defer reprocessing. Indeed, in the April, 1980, issue of the American Nuclear Society's "Insight", the ANS declared its intent to persuade the Commission to expand this proceeding to include disposal of reprocessing wastes, not just spent fuel. Once AFR's are constructed and there is no longer any danger of shutdowns at nuclear plants due to full fuel storage pools, there is no longer any pressure on the industry to cooperate in the development of a program for the disposal of spent fuel which would result in the burial of fuel elements which are still of value to the industry. Instead the nuclear industry would have the incentive to delay the development of the permanent disposal program until it can obtain a reversal of the no reprocessing decision.

In addition to removing the incentive to work for a permanent solution to the nuclear waste problem, AFR's pose another impediment to a permanent solution, i.e., the money, time, and manpower spent to develop AFR's takes away from the intensified effort which should be directed to the permanent resolution of the nuclear waste question. The AFR program described in DOE's statement represents an extensive commitment

of time, money, and manpower. Indeed Congress is spending a good deal of time attempting to legislate an interim AFR program rather than developing a statutory framework for a permanent solution.

Therefore because it will remove the pressure to resolve the numerous unsettled policy questions concerning a permanent waste disposal scheme, and because it will drain attention and resources away from a permanent solution, DOE's AFR program represents yet an additional institutional impediment to the repository schedule proposed by DOE. Unfortunately, DOE once more seems totally unaware of the practical implications which its own interim solution poses to its own permanent disposal program. Thus the NRC should not place confidence in DOE's schedule.

G. Summation

DOE's Statement of Position presents a waste disposal program which, like so many programs before it, is worked out in meticulous technical detail but disregards the realities involved with the implementation of the proposal. No matter how carefully considered DOE's program may be, the probability that it will go forward as scheduled despite the numerous policy and institutional uncertainties discussed in this Statement is extremely low. The reality of the nuclear disposal situation is that DOE's schedule probably will not be met. In Part III of this Statement, Ohio offers its suggestion to the Commission concerning the manner in which the Commission should deal with this reality.

III. CAN SPENT FUEL BE STORED ON-SITE UNTIL OFF-SITE DISPOSAL OR STORAGE IS AVAILABLE?

During the past year both the NRC in its Generic Environmental Impact Statement on Handling and Storage of Spent
Light Water Power Reacter Fuel, NUREG-0575, and the DOE in
its Final Environmental Impact Statement on U.S. Spent Fuel
Policy, DOE/EIS-0015, have approved the environmental impact
of continued on-site storage of spent nuclear fuels in water
pools. Indeed, in terms of the technology involved with
indefinite above-ground storage of spent fuel, there seems to
be no real difference between st-reactor (AR) and AFR storage.
Thus, Ohio belives that to the maximum extent possible AFR
storage should be discouraged unless indefinite AR storage
in technologically infeasible in a given case. AR storage
for the life of the plant and beyond should be the rule, not
the exception.

DOE's statement fails to justify AFR storage on either safety or economic grounds. DOE cost estimates for AFR storage are incomplete. They are based on an assumption that a repository will be available in 1996. Ohio does not agree with this assumption. In addition, DOE's statement does not clearly indicate whether transportation costs are included. In any event, there is neither a serious comparison between the costs of AR and AFR storage nor a comparison of transportation costs between the single shipment involved with AR storage followed by shipment to a repository and the double handling

involved in shipment from AR storage to an AFR to a repository. While it is true, as DOE maintains, that the cost for AFR storage is only a small amount percentage of the total fuel cycle cost, that does not constitute justification for DOE's extensive AFR program.

In a similar manner, safety considerations do not justify an expanded AFR program such as proposed by DOE. While DOE attempts to minimize the transportation hazards involved in the shipment of spent fuel, whatever those hazards may be they are doubled by handling the spent fuel twice, first from the reactor to the AFR, and then from the AFR to the repository.

The only rationals for an extensive AFR program is that it allows for the continued deployment of nuclear power while decoupling in the public's mind the benefit of continued use of nuclear power from the costs associated with disposal of the resulting waste products. A rather favorable picture of nuclear power is presented when the public is presented with the picture of a clean, economical source of energy which will produce power for forty (40) years and then be removed after its useful life. An entirely different picture is created if to this same picture is added a forty (40) year accumulation of spent fuel which could remain on the site for an indefinite period of time after operation has ceased until a safe disposal program is implemented. Yet it is this later picture which represents the present and near-term reality of nuclear power.

The AFR program is nothing more than an attempt to disguise this reality by transfering the problem from the point where it was created to another location.

While there may be some need for AFR's due to storage space limitations at some currently operating plants, there is no excuse to continue to perpetuate the illusion with new plants. The NRC should acknowledge the uncertainties concerning a date by which a repository system will be implemented and revise its regulations to require all new applicants for construction permits to provide for indefinite AR storage of all spent fuel generated over the life of the plant. In addition, the Commission should require applicants to provide with the application for a construction permit plans to provide for indefinite storage of all spent fuel to be generated over the life of the plant. In this way the continuing need for AFR storage facilities will be reduced and national attention can be focused upon the implementation of the repository system rather than on interim solutions.

CONCLUSION

DOE's Statement of Position presents one more scheme in a long series of grand schemes intended to solve the puzzle of disposing of nuclear wastes. DOE's Statement shows careful consideration of many of the technical and administrative details involved in the proposed system. Unfortunately, however, the Department's position reflects a failure to grasp

the potential for delay in implementing the proposed program due to institutional uncertainties which are beyond DOE's control. As a result, while the Commission may choose to have confidence in the technical feasibility of DOE's plan, it can have no confidence that the plan will be implemented according to the schedule proposed by DOE. This inability to ascertain a reliable date by which a repository system will be in operation is the reality of the nuclear waste dilemma. Ohio urges the Commission to address this situation realistically. Rather than relying upon the interim "solution" of AFR's which will probably only contribute to further delay in the final disposal of spent fuel, the Commission should revise its regulations to require each new applicant to provide for indefinite AR storage for all spent fuel generated over the life of the plant. That way, if the disposal plan continues to be plagued by delay, adequate precautions will have been taken to assure the continued operation of the nuclear power plants now on the drawing boards. By adopting this approach the Commission will be "talking straight" to the American public and perhaps be able to regain the confidence of the American public that the Commission has a handle on the problems of nuclear power and is realistically attempting to address them.

Respectfully submitted,
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