

MAKING CONSULTATION AND CONCURRENCE WORK

by

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## I. Introduction

Of all the institutional issues associated with nuclear waste management--that is, of all the questions about which organizations should plan, regulate, and manage waste operations--none is more politically complex than the question of the states' role in siting waste repositories. Legal powers in this area are unclear: the courts have not decided whether the states have the Constitutional authority to block a facility that the federal government wants. State concerns cannot be simply ignored, however, since litigation by a recalcitrant state almost surely could stop such a facility for some time.<sup>1</sup> Congress could try to ease the states' fears by giving each of them a veto over proposed repositories, but concern exists that every state would exercise that veto, leaving the country without places to put its nuclear garbage.<sup>2</sup>

The Interagency Review Group and later President Carter sidestepped the question of federal preemption versus state veto. Instead, they proposed a new process designed to resolve federal-state disputes before positions polarize and the situation becomes a matter of which level of government will impose its views on the other. Their proposal was to create a new federal-state process of "consultation and concurrence." "Under the framework of consultation and concurrence," said Mr. Carter last February, "a host state will have a continuing role in Federal decisionmaking on the siting, design and construction of a high level waste repository."<sup>3</sup> The President did not define exactly what that

that role might be. In late July, the Senate passed a bill (S.2189) that set forth procedures for federal-state interaction and which, in the event of a dispute between the Energy Department and a state, would have given Congress the final authority to decide whether the Department may apply to the Nuclear Regulatory Commission for a license.<sup>4</sup> The House did not accept this Senate language, but even if the next Congress does it still will be up to DOE and such advisors as the State Planning Council to define "consultation and concurrence" (C&C) more precisely and to specify detailed roles and procedures.

DOE also will need to decide what role C&C is to play in overall national efforts to resolve waste management conflicts. Consultation and concurrence is not the only process that will be used to help build agreement. Others include DOE processes of public review and participation, research and development activities aimed at settling factual questions, Nuclear Regulatory Commission proceedings, federal interagency decision efforts, and of course Congressional policy-making.

This paper tries to define the issues that will face the Energy Department as it implements consultation and concurrence. The first section discusses the political disputes that C&C is supposed to help resolve and what their characteristics imply for the design and implementation of a consultation and concurrence program. A second section examines several selected topics relevant to the implementation of a C&C process, including the possible impact of S.2189's provisions on efforts to build federal-state agreement and C&C's place in the over-

all national attempt to build this agreement on nuclear waste plans.

## II. Resolving Disputes

### A. The purpose of consultation and concurrence

The stated purpose of consultation and concurrence is to resolve federal-state disputes over the siting of waste repositories before a confrontation develops between the two levels of government, and to have the disputes resolved by the federal and state governments themselves, rather than by the courts. The Interagency Review Group puts it this way:

Consultation and concurrence...implies an on-going participation and the development of a cooperative relationship between states and all relevant Federal agencies during program planning and the site identification and characterization programs on a regional basis using the systems approach, through the identification of specific sites, the joint decision on a facility, any subsequent licensing process, and through the entire period of operation and decommissioning.<sup>5</sup>

A close observer of nuclear waste policy has amplified this theme:

The key to the consultation and concurrence process is that conflicts between a state and federal government can be worked out through a process of dialogue and accommodation better than by a process of judicial confrontation, which may produce a winner and a loser but no workable solution to a nuclear waste problem.<sup>6</sup>

All of this attention to federal-state relations stems of course from a basic fact: while state legal powers are unclear, in practice a state can use litigation or lobbying in Congress to delay or even kill a waste facility that it does not want within its borders. In fact, at last count thirteen states had enacted Constitutionally-questionable but politically-significant legislation prohibiting nuclear

waste repositories within their borders.<sup>7</sup> From the federal government's point of view, consultation and concurrence is an attempt to win state approval for federal waste activities, particularly site exploration, by guaranteeing the states full access to information and a role in decision-making.<sup>8</sup> For their part, the states and their advocates in Congress see C&C as a means to prevent arbitrary behavior by either side and as an orderly procedure to resolve disputes.<sup>9</sup>

But since the concept first was proposed, most discussions of it have focused on what happens if the process fails to produce agreement. Should the states have a right of "nonconcurrence" (i.e., a veto) in case the federal government and a state cannot resolve their dispute, or will federal preemption be invoked in the end? This question was often asked at the September 1979 Orcas Island meeting on C&C<sup>10</sup>--reflecting both the importance of the veto question and awareness that consultation and concurrence may not be able to settle these differences. More recently the Senate considered giving the states a veto but eventually rejected the idea. In any event, the question of who should have the final word is a political value judgement, and a decision that Congress may try to make itself.

However, a second, equally important question has received less attention: What kind of consultation and concurrence process would have the best chance of actually resolving--even preventing--these particular federal-state disputes, and what specific government mechanisms might be used? This is the question I focus on in the pages that follow.

I argue that the debate over nuclear waste is marked by serious technical uncertainties and genuine value differences. If consultation and concurrence is to help reduce conflict and build agreement on these matters, it must be more than simply a mechanism for sharing information or allowing states to comment on proposed DOE plans. It also must be a forum for (i) effectively verifying technical findings to the satisfaction of the states and (ii) negotiating agreements on value questions and then changing waste management plans accordingly. That is, the best strategy for implementing consultation and concurrence is one of "verification and negotiation". It is an iterative, participatory approach, one that involves receiving regular "feedback" from the states and successive reformulations of plans. It is not a "linear" process where one, unchanging plan is presented and then approved by the various authorities.

To explain how and why such a strategy can help produce true political agreement, we need to review both the character of waste management disputes and the kinds of decision-making procedures that foster verification and negotiation. It is to these matters that we now turn.

#### B. Nature of the political disputes

The first step in studying consultation and concurrence matters is to analyze the disputes that C&C is supposed to help resolve. In the case of waste management, citizens argue over these three well-known sets of issues:



- Factual questions. State officials and citizen groups wonder what risks are involved in hosting a waste repository and especially whether it really will work as promised. They also worry about the "non-radiological" impacts of a repository.<sup>11</sup>
- Differences over the definition of safety. What is considered to be a "safe" facility or a "safe" national waste management program is a value judgement, since risks that may be acceptable to one group may not be acceptable to others.
- Other value differences. Groups also differ over such matters as financing, compensation, the national distribution of nuclear wastes, and the procedures to be used to decide repository questions. Questions of equity are particularly important. A state may feel that a given DOE plan puts an "unfair" burden on it. Or local citizens may feel that they deserve some sort of compensation in return for accepting a project. States may also want concessions on matters of timing, transportation routes, socio-economic impacts, employment, and so forth. And a state may want something else (say, in the way of oil or coal policy) in return for accepting a repository.

Clearly, the factual questions are related to the value issues. As long as the "facts" are not clear, value differences are likely to remain sharp. However, simply "settling" such factual disputes will not by itself bring policy agreement; the value differences remain and require negotiation if agreement is to be built.

The "task" of waste policy-making mechanisms--including consultation and concurrence--would appear to be to resolve and to the extent possible prevent disputes over these matters. To be "successful" in winning support for a repository plan, C&C--in conjunction with the other efforts to settle differences--most likely would have to "resolve" all three

sets of disputes to the satisfaction of at least key state officials and their main constituencies. It would have to build fairly stable "working agreements."

But this task will be difficult, given that people disagree so sharply on these issues. Why is this? In order to understand these disputes better, we must re-examine some very familiar questions about the politics of nuclear waste: Why do people oppose nuclear waste projects? Why are the disputes between proponents and critics so difficult to resolve? And what do the answers to these first two questions suggest about how DOE might best try to resolve the disputes?

I want to approach these questions by asking something that underlies them all: What is it about nuclear waste generally and specifically about the projects proposed to date that tends to increase public concern, skepticism, and opposition?

There are three main reasons. First, the nature of nuclear waste--its properties, if you will--do not make waste repositories seem very attractive or their siting particularly urgent. The following list of properties is familiar but worth repeating:

- High risks. Many people perceive nuclear waste facilities to be highly risky, largely because the wastes are seen as unusually dangerous materials, because they are dangerous for immense periods of time, and because exposure to the risk is essentially "involuntary" for those people living around repositories.<sup>12</sup>
- High technical uncertainty. Whether facilities will work as designed and what health and safety consequences would follow from failure are not clearly understood or proven at this time.

Uncertainty exists partly because repositories are a new kind of facility; we have no direct operating experience with them.

- No imminent health threat. Yet at the same time there is no compelling technical or health reason to rush into disposal.
- Long lead-time. Unlike most construction projects, the federal nuclear waste program will take years to design, discuss and deploy, making periodic reevaluations and program changes more likely.
- Uneven distribution of benefits and risks. The people who benefit from nuclear power live all over the country. Yet it is likely that only a few states and communities will be asked to assume the dangerous burden of handling the wastes. Thus there is a significant difference between those who get the benefits and those who bear the risks.<sup>13</sup>

Second, government policy--at least in the past--has been to propose projects that also have certain additional properties. Two such properties are particularly important politically:

- The government has announced its interest to build test facilities in specific areas before publicly demonstrating the safety and reliability of the basic technology.
- The government has offered few incentives to localities--either assurances that they will not be asked to assume the full burden of waste disposal or else benefits that would make a repository look more attractive.

The third factor that people react to is the historical legacy of past nuclear waste programs. If the government were perceived as willing and able to do an excellent job with its waste programs--

technically, organizationally, and politically--then few citizens would be concerned and opposition would be minimal. But historically this has not been the case with U.S. nuclear waste politics. High public expectations seem to be one half of the explanation. Many people apparently expect technical programs to run well--perhaps a legacy of the reputation for high performance enjoyed by such efforts as the Apollo program. Shortcomings in performance or the appearance of incompetence can severely damage the reputation of an agency. Also, segments of the public now expect to participate in major decisions affecting them. Any appearance of trying to build something without consulting affected parties first tends to generate opposition. The other half of the explanation is that for whatever reason, past efforts by DOE and its predecessors to site repositories have been perceived by many citizens and state officials as technically flawed and politically arrogant.<sup>14</sup> The result has been skepticism and distrust of government waste programs, complicating DOE's more recent efforts to site repositories. In some cases, too, DOE has simply fallen victim to today's general distrust of all government.<sup>15</sup>

Given these various properties of the U.S. waste management effort, it is not surprising that citizens and state officials react the way they do. Those who would benefit from waste disposal--but would not have to bear its burdens--have an incentive to push for repositories. But given the high stakes and limited local benefits, those living in potential host communities have few incentives to accept a repository and are likely to be less than enthusiastic about having one in their

own backyard. Moreover, the uneven distribution of benefits and risks makes nuclear waste disputes much harder to resolve than most other energy facility siting conflicts. The absence of federal programs to compensate localities for these risks further complicates matters.

Second, the presence of high stakes affects what kind of project people will accept. They tend to reject any facility that does not meet their definition of safety. This point, in turn, affects bargaining between them and the government. People will bargain on a wide range of matters--but generally not on matters that may affect their personal safety. If the citizens of a community feel that a proposed waste repository is "unsafe" (by their definition), then the usual bargaining strategy of simply offering more money will not work. The presence of high technical uncertainty further complicates the issue. It becomes hard to "prove" to skeptics that a proposed facility will be safe, reliable, and not a major hazard.

Third, the long life of the wastes also contributes to certain kinds of concerns. Some groups may expect that all possible failure modes be identified in advance and appropriate preventive steps taken. They may also want clear evidence of such planning before they give their political support.

Fourth, with new information coming in periodically, it is not surprising to see people also change their minds about one aspect of the program or another. And attempts to authorize a project without first consulting those affected--and revising proposals to reflect their concerns--are likely to encounter major opposition.

Some other political responses to these properties of nuclear waste are less obvious. In particular, the combination of high technical uncertainty plus high stakes not only makes it difficult to persuade individual skeptics. It also helps polarize political positions--and thus exacerbates the conflicts between groups. The reason is that people tend to fall back on general beliefs and values when the facts of a situation are unclear. For example, some people believe that "experts" and government officials are untrustworthy; others take the opposite view. Some believe that technical projects generally are full of problems; others have great confidence in technology. Some people are risk-averse and prefer not to take chances when the exact likelihood of accidents is unknown; others are more willing to take risks, especially when the project is linked to something they value, such as the future of nuclear power. Under conditions of uncertainty, people often base their opinion of a particular project on these more general criteria.

In short, some people are likely to find a given waste management proposal "reasonable," while others, with different beliefs and values, will strongly disagree. Each position is internally consistent and logical. Thus it is unfortunate that some people on each side label the others irrational for not seeing "the facts" the same way they do. The net results are more polarized policy positions than would exist under conditions of certainty.

Of course, while reducing factual uncertainty is a necessary precondition for agreement, it certainly is not a sufficient one. Some groups will find the now clearly-defined risks acceptable while others

with different values may not. It is not a matter of who is "right" and who is "wrong;" the two sides simply have different values and preferences.

Finally, high stakes combined with negative attitudes toward government have brought more actors into the debate--more state officials, more local citizen groups, and more environmentalists. Many of these actors are more skeptical and difficult to persuade than the industry groups that federal agencies traditionally dealt with. They also tend to stay involved longer, often examining small details far beyond the initial stages of a project.

In short, many groups are now involved in the waste management debate, the skeptics among them are numerous and hard to win over, and the policy differences between the two sides are enormous. These political features of the waste debate--themselves consequences of the present properties of nuclear waste--add up to deep political disagreement, that is, to a serious absence of consensus. Moreover, consensus cannot be built easily in this situation. It cannot be built, for instance, simply by disseminating existing technical information (many will find the data inconclusive); or by offering money to affected communities (money helps but does not eliminate safety concerns); or by allowing formal public participation (it also helps, but only if people feel their views have a real impact on policy); or by asking people to simply trust the government and its experts (many will not). Wariness has become the dominant state attitude toward federal waste management programs, and state officials will

not automatically accept DOE's ideas on what to do. To these people it is not clear which option is the best way to proceed or whose voice is the most trustworthy.

Having said all this, we turn to the next question: What do these various findings about the politics of nuclear waste suggest about how the Energy Department might try to resolve the disputes?

The answer seems to have two parts. First is the well-known point that some of these troublesome properties of waste management can be made less troublesome through either research or changes in DOE policy. Of all the properties of nuclear waste itself, technical uncertainty is the one most amenable to DOE efforts--though of course it can never be completely eliminated. In addition, the government can change the two policies we mentioned above--approaching communities before safety is "demonstrated" and approaching them before equity is ensured. And efforts to improve overall program competence naturally would do much to restore the Department's credibility with the public. That is a crucial step toward rebuilding public confidence and support.

Second, though, is the other side of the coin. What programs can be used to resolve the inevitable remaining disputes? It is here that we get into the issue of what such processes as consultation and concurrence can do to help settle disputes--disputes over facts as well as over values.



### C. Setting factual questions

We can now further discuss how these properties of the waste issues complicate the job of resolving disputes over factual matters. We also can identify some of the features a consultation and concurrence process needs to overcome these complications.

Again, the combination of high risks (and thus high stakes) with high technical uncertainty leads people to be very careful and skeptical about assertions that a particular facility will be safe. It may also be hard to convince them that the government is correct in its estimates of the facility's non-radiological impacts on the community, such as socio-economic impacts and more subtle effects. Distrust of the government and a persistent feeling that much basic research remains to be done make it even harder to convince skeptics. DOE's research and development programs tend to be treated harshly. One critic, California Energy Commissioner Gene Varanini, put it this way in a 1979 paper:

Historically, programs postulated or developed to resolve the nuclear waste program have resulted in engineering disappointments, raising public anxieties and further increasing the necessity of convincing the public that the nuclear waste issue can be properly managed.

He then adds that

The main stream Federal programs in demonstrating the technology of managing high level nuclear wastes have grossly overemphasized the mining, handling, and emplacement engineering aspects of the problem to the detriment of using the scientific method to develop evidence to establish that a sufficient level of confidence associated with our ability to isolate wastes for very long periods of time.

Such quotes are included not to heap further criticism on DOE but to illustrate the very high real depth of skepticism that exists

here. Given the skepticism, what can DOE do about it, and what role can a consultation and concurrence process play in this effort?

First, it is important to recognize the range of factual questions that will be raised--questions about the geology of mined repositories, the structural integrity of waste canisters, the reliability of the all-too-human organizations that will transport and emplace the wastes, and various impacts on the communities and people involved. Given the number of questions that remain unanswered to the satisfaction of politically important skeptics, more research and evidence are vital. This work, of course, is not a task for the consultation and concurrence process but rather for DOE and NRC research and development. But again, this research has become politically as well as technically important to the waste program. Moreover, DOE should design its R&D program with these politically significant questions in mind. Other papers by our Berkeley group<sup>17</sup> suggest strategies for conducting more research on organizational reliability and program impacts. Consultation and concurrence can help these efforts by serving as a forum to identify R&D issues and to discuss research priorities.

Second, consultation and concurrence processes can help resolve factual disputes by serving as a forum for verifying solid research findings. Verification is important because in today's political climate of distrust skeptics will not simply accept DOE's interpretation of research findings--or any assurances of program reliability based on these results. Instead, they are likely to demand credible, independent verification of any findings that purport to clear up major

uncertainties or "prove" the safety of a particular proposal. While analyses by the Environmental Protection Agency, the NRC, and such outside panels as the National Academy of Sciences and federal advisory groups can play a valuable role here,<sup>18</sup> so can the C&C process. It provides a mechanism in which state experts (perhaps funded by DOE) and scientists from citizen groups can examine DOE's evidence. If these independent reviewers agree with DOE, it will go a long way toward resolving disputes over what the facts are.

The Three Mile Island case provides an example of how such a review can help. Local citizens in the TMI area simply did not trust the Nuclear Regulatory Commission when it said that venting krypton gas at the plant was safe. The agency was so distrusted that nothing it said or did convinced these residents--a situation that NRC found bewildering and frustrating. Only when Governor Thornburgh asked the Union of Concerned Scientists to investigate and they said that venting posed no physical hazard did citizen objections subside.<sup>19</sup> Similar independent reviews might clear up citizen doubts about a particular new DOE repository design--assuming of course that the design is a good one and the outside experts find the experimental evidence sufficient and convincing.

The assertions to be examined and--if found sound--to be verified include more than just those covering geology and engineering hardware. The Three Mile Island accident heightened public awareness of the role human and organizational failure can play in nuclear accidents. DOE may find it advisable to develop its organizational plans for

waste repositories early and present them to the states at the beginning of any site selection stage of consultation and concurrence.

Note that this Three Mile Island arrangement for reviewing government plans differs from that of a "science court" or a "siting jury."<sup>30</sup> It is certainly possible that once they establish their credibility new groups of "impartial" experts could help clarify technical matters-- though their views on such value questions as the acceptability of a given proposal might carry no more weight than those of any other group of general citizens. But early suspicions and uncertainties about the ideological biases of any new "impartial" group would be inevitable, delaying its effectiveness. This especially would be the case if the group had "governance" responsibilities, that is, if they were to help decide policy as well as offer advice.

More familiar to Americans is the case where frankly partisan groups of experts challenge each other.<sup>21</sup> When the experts disagree many citizens find reason to ask for more research or to fall back on general value positions; when the experts agree on the scientific and technical soundness of the evidence behind a given policy proposal, then citizens often find little reason to object to the government's version of the facts.

Of course, such partisan debate can be messy and confusing. One promising technique for clarifying where experts agree and disagree on a particular issue is that of "scientific mediation," where a neutral mediator or arbitrator sifts through the arguments of both sides and highlights these points of agreement and disagreement. A recent paper

suggests applying this technique to the nuclear waste controversy.<sup>22</sup>

The staff of the State Planning Council also has raised the possibility of using such neutral arbitrators to help resolve substantive conflicts.<sup>23</sup>

This discussion, then, argues for making verification activities a central part of any consultation and concurrence process. The key to doing this is ensuring that state officials have their own expert staffs and consultants. It also argues for providing information and perhaps technical assistance to those citizen groups most trusted by state officials. If the states have difficulty funding their own expert staff, then DOE should give serious consideration to providing federal money for this purpose. Also, the Department's present policy of contracting for research with universities and state agencies in those regions under geological investigation will help create knowledgeable groups of local experts.

#### D. Resolving value disputes

How can the Energy Department put together a broadly-supported waste management program? One strategy might be for the Department or the Nuclear Regulatory Commission to "analyse" the politics of the situation and propose policies likely to win wide political approval. Or alternately, they might ask Congress for a firm set of policies--on such controversial issues as safety, distribution of wastes, and so forth--to guide the development of particular projects. The difficulty is that neither of these approaches will work, and for a reason discussed earlier: the absence of political consensus.

In a paper prepared for the Office of Nuclear Waste Isolation,

Gerald Garvey gives the main reason why:<sup>24</sup>

In the field of NWTs [National Waste Terminal Storage Program] policy, an undue reliance on either technical analysis...or on administrative decision-making [i.e., the assumption that D.O.E. officials can "solve the problem"] will prove misplaced, since the efficacy of the analytic and the administrative processes can be relied upon only after a solid legislative mandate to move ahead with vigor has been achieved. Such a legislative mandate itself must be based on a strong consensus at the popular level. As a matter of political fact, no such consensus today exists with respect to the nuclear program generally, let alone with respect to one of the least understood and potentially most frightening components of the program--namely, nuclear waste storage. The real source of delay in the overall U.S. nuclear program is to be found in the absence of a popular level consensus...

To the extent that a program as controversial and as difficult as an NWTs plan is mounted by D.O.E. without the backing of such a mandate, it will be at its most vulnerable so far as organized opposition is concerned, particularly in the litigative arena. As a consequence, functionaries within the appropriate administrative and regulatory institutions will probably find it quite impossible to move ahead on a coherent program--this even though marching orders may have been officially issued by the President and the Secretary of Energy.\*

That is, neither of these two standard strategies for developing coherent programs will work in the absence of a solid, stable political consensus on what should be done and how it should be done. In a situation of high uncertainty--both technical and political--new information and shifting coalitions can quickly cut support for particular projects. One corollary is that even an agency with extraordinary political insights at a given time cannot fashion a program that will survive unchanged over the years.

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\*Garvey recommends using a process of bargaining to resolve this problem--though not so much bargaining between DOE and possible host states as between the states and representatives of those groups potentially benefitting from nuclear energy.

In short, trying to set policy in the traditional way will not work as expected--a point worth examining in some detail. For along with making programs vulnerable to outside lawsuits, the absence of agreement also causes unexpected coordination problems within the government.

In particular, Congress and the regulatory agencies find it hard to establish stable policies to guide program planners. Regulatory agencies, for instance, may update regulations in light of new technical information. For its part, Congress is always sensitive to changes in public opinion; if no consensus exists and if public views shift over time, then Congress will not take a "hands-off" attitude towards the program.

The resulting fluctuations in Congressional and regulatory policies means that DOE finds it next to impossible to develop its waste management programs and associated projects in a traditional step-by-step, "sequential" manner.<sup>26</sup> Such step-by-step decision-making once was the standard procedure for deciding what energy facilities to build and where to put them. For instance, a state legislature would pass a law setting general policy about electrical generating stations. Then the appropriate regulatory agency would issue regulations and produce agency case law, giving planners in the utilities a good idea of what projects would meet with agency approval. Decision-making thus would be "sequential"--a fairly smooth process of legislative action, agency regulations, utility planning, and agency review and approval. Periodically the legislature would review the agency's performance but generally would leave basic policy intact and stable.

But waste management is different. Given the technical and political uncertainties, overall policies are unstable and unpredictable. As a result, DOE has no firm ideas of what kinds of projects will be finally approved by either federal or state officials. In fact, while some regulations obviously will be written in advance, much basic policy--that is, many basic political decisions--will be made after specific projects are proposed, not before. That is, policy-making and program design will go hand-in-hand. Both policy-makers and DOE officials find themselves groping for solutions, in a process that is anything but smooth. Under these conditions, decision-making necessarily becomes a process of continually making proposals and then rewriting them in response to political reactions--a process more "iterative" than "sequential."

This is an awkward kind of process. Within the federal government itself, actors make decisions without fully knowing what other actors will do; frequently someone will make a decision, knowing full well that it may be overturned later in the light of new formal policies or shifts in the underlying political climate. Political leaders, for instance, make budgets and program decisions knowing that changes in the views of major constituencies may lead them to change their minds. They also want more technical and political information before they commit themselves to a long-term program but are often unsure of exactly what information they want. Regulators in the waste management field are expected to develop design standards and siting criteria--at least tentative ones--but without any firm policy instructions or detailed



information on the technologies involved. For its part, the Energy Department is expected to identify and evaluate options but without knowing what regulatory criteria these options might have to meet. No one governmental actor is able to reach "final" decisions until getting something from the others, each side is engaged in a mutual guessing game, and the whole process is often long and time-consuming. People must act and do, but frequently the result are programs that must be periodically revised.

This kind of process is particularly difficult from those who plan and implement programs. Civil servants usually want--and feel they need--stable policy instructions and a predictable political environment. Technical agencies particularly want them: their programs involve long lead-times, the difficulties and costs of major program shifts in mid-projects are often enormous, and the personnel (often engineers) are trained to design projects to meet clear, detailed criteria. They tend to want either clear "marching orders" or to be left alone--to let their "experts" handle the program. A bureaucracy that receives no such orders, yet is constantly watched and criticized, tends to become confused, cautious, and frustrated. It also may want to proceed with an established line of policy even if the political climate shifts. But again, other federal actors--with their own particular jobs and constituencies--may want to change the program as the politics change.

Something similarly "iterative" inevitably takes place in federal-state relations, as well. State and local officials, interest group leaders, and general citizens are asked for their views, yet remain

wary of committing themselves until they get more information on options and possible consequences. Yet the Energy Department needs state political views and state permission for exploration in order to define what best options are. The point about exploration is a particularly good example of how nuclear waste policy-making can take on a certain "catch-22" quality. The states and others want competent proposals from the Energy Department. To get information on particular sites and geologies the Department needs physical access to these sites. Yet the states, distrusting the Department and fearing that any half-way suitable site will be selected for a full-scale repository, resist giving federal officials this access. The situation can become one of stalemates.<sup>27</sup>

Such stalemate will be the result of iterative decision-making, unless formal decision procedures are designed to build steady if sometimes tenuous, political agreement. The key to this is the early identification of major program options, the gathering of information about them, open discussion of them, and the negotiation of mutually-acceptable policies. But this is easier said than done. What strategies can be--and are being--used to actually do these things? And how can consultation and concurrence help?

A four-step approach seems to be evolving in the waste management field. Understanding it and improving it would seem essential if value disputes over waste policy are to be resolved and consensus built. The four steps are:

- Settling what can be settled on. The first step has been to seek agreement on those basic substantive and procedural issues that are amenable to early resolution. For instance, the Interagency Review Group and Congress have made considerable progress toward developing widely-supported general policies on substance (e.g., use of multiple sites, investigations of multiple media, agreement on a goal of eventual geologic, permanent disposal) and policies on procedure (e.g., the idea of consultation and concurrence, the emerging consensus in favor of letting Congress make the final decision on whether DOE shall submit a particular proposal to the NRC). Additional interagency and Congressional deliberations might narrow the range of disagreement on other issues.
- Refining procedures. When agreement on details of substance cannot be reached soon, a "fall-back" position is to develop a widely-support process for settling such substantive differences. Considerable progress has been made on this front, as efforts continue to refine the broadly-supported concepts of consultation and concurrence and a national plan.
- Developing options and information on them. As we've seen, technical uncertainty--combined with a reluctance to make decisions about dangerous wastes until the uncertainties are resolved--is at the root of the present difficulties in developing social consensus and clear policy. Developing more information is thus important. Todd La Porte has discussed the situation this way: when federal officials ask politicians and citizens for policy direction, the response should be to ask them first to identify the options and the likely consequences of each of them. In this way, he suggests, leaders and the public will have a basis for judging alternatives and evaluating what the Energy Department recommends.<sup>28</sup> However, such a strategy requires changes in the way technical agencies work. Traditionally DOE and its predecessors chose

to pursue one waste management option, leaving the public with little comparative information and itself with no "back-up plan" if that one favored option met with political opposition. DOE and ONWI are now in the process of researching a variety of geological and technical options. How they might better equip themselves to identify these and related organizational and regionalization options will be discussed later in this paper.

- Negotiations over options and details. Again, DOE cannot formulate widely-accepted program proposals by itself. In the absence of some social consensus, too many political actors with difficult-to-discern views are involved for the Department to be able to do the necessary political "calculations." Resolutions of value disputes must therefore be negotiated, and over time, since people's political reactions only will develop as they gradually review options and information. Creating forums for negotiating key value differences among interested groups thus remains a high priority.

This emerging four-step approach to building agreement and setting policy is, in effect, a process of mutual "political learning"<sup>29</sup>--a process by which government and interest groups learn about problems and options and gradually narrow their differences. It involves much consultation and bargaining and inevitably is a long process, even with periodic attempts to legislate a "comprehensive solution". Research and development assumes a special role in such a process, becoming doubly important politically: not only does it help with verification of facts but also facilitates the evaluation of program options.

Consultation and concurrence can help, as well, mainly by becoming a forum for information exchange, serious discussions of options, and serious negotiations between the states and federal government over

matters of substance.

Several points about negotiation deserve further elaboration. In the first place, a simple exchange of information and views will not resolve disputes over nuclear waste policy and sites; again the value differences and skepticism are too real and deep for that. If the Energy Department wants to get voluntary cooperation from the states, it must be willing and able to negotiate with the states and adjust its plans and programs to reflect the bargains struck. Negotiations over timing, financing, compensation, regulations affecting the facilities, and even generic design criteria, are vital.

Second, though, there is still a limit to what can be settled through negotiation. As mentioned earlier, people won't "negotiate on safety"--they will not accept a facility, no matter what compensation is offered, if they believe it to be inherently unsafe. In this situation, the Department's options are to verify that the design is "safe" (by the local community's definition), "improve" the design, or look elsewhere for a site.

Third, a negotiation strategy of this type suggests a particular meaning for the concept of "concurrence." Much of the discussion at the Orcas Island conference and elsewhere focuses on what one might call "formal concurrence," that is, official state positions on various DOE proposals. Some such formal statements are probably desirable, particularly when the Department wants state support for an application to the NRC and perhaps at the site-banking stage. But these discussions have limitations. Aside from an unfortunate tendency

to be divorced from any hard analyses of what conflicts might need resolution and what conditions might foster agreement, they also often take an overly narrow and legalistic view of concurrence. Except at the end of the site evaluation process, fixed permanent go/no-go decisions by the states simply cannot be expected in this highly unstable political climate. State attitudes will change over time, and efforts to push states into early binding decisions are likely to backfire: faced with the prospect that a particular site later may develop serious problems, most states will oppose that site if pressed to make an early commitment.

The best chance of gaining state support is to be sensitive to its political concerns and questions and to adjust both R&D and repository designs accordingly. Such a "process-oriented" view of concurrence is shared by the staff of the State Planning Council. In their definition they emphasize both negotiation and verification:

Concurrence, as used here, is an incremental process evolving from continuous consultation between Federal agencies and States or Tribes, so as to reach agreements with effective participation by State/Local/Tribal governments in the decision-making process. Concurrence involves the growth of confidence of the public and elected officials based on a gradually maturing technical consensus reflecting agreement that the implications and conclusions reached by the research and development program have been appropriately analyzed.<sup>30</sup>

In short, it may be more prudent for the Department to check with each potential host state on a regular basis, and to proceed with its plans if it continues to receive "informal concurrence" from key leaders. If major questions or objections develop, DOE may find it more constructive

to enlarge its research effort or to change its proposals rather than give into the temptation to threaten preemption.

What this half of the paper concludes, then, is that a strategy of "verification and negotiation" appears to be the way most likely to reduce conflict and build political agreement about nuclear waste policy. "Consultation and concurrence" processes should be designed with this strategy in mind.

### III. Consultation and concurrence's relation to other conflict-resolution mechanisms

#### A. Seven mechanisms

Consultation and concurrence of course is only one of several decision-making and conflict-resolution processes now used to formulate nuclear waste policy--mechanisms where people meet, discuss views and options, and, one hopes, eventually settle factual and value disputes. These mechanisms include:

- consultation and concurrence (oriented toward federal-state discussions of site-specific issues)
- the State Planning Council (which serves as a forum for aggregating and communicating state views on "generic", i.e., national issues)
- DOE programs for public review and participation (include provisions for public comment on environmental impact statements and the new national plan for waste management)
- DOE research and development programs
- federal interagency committees (designed to settle differences among agencies and, to a degree, differences among a constituencies these agencies respond to)
- NRC rule-making (a political as well as technically-based effort to set safety and siting criteria)

- the Congress and White House (forums for debating "large", national issues and for setting the budget).

In the pages that follow I want to discuss three questions about how the tasks of verification and negotiation might be divided among these seven mechanisms and what this implies for the design of C&C processes. These three topics are:

- How far might Congressional legislation go toward resolving--and preventing--major nuclear waste disputes? For instance, what would be the effect if S. 2189 were to become law, and what would this effect imply for the role and organization of C&C processes?
- How might the tasks of verification and negotiation be divided between consultation and concurrence and the other non-Congressional mechanisms? In particular, given their particular capacities, motivations, and degree of credibility, how many waste disputes are they likely to resolve and how much of the job are they likely to formally or informally leave to C&C? Particular attention will be paid to present and possible future role of the State Planning Council.
- Finally, what do the answers to the above questions about C&C's role imply for how consultation and concurrence efforts should be organized and operated?

I want to discuss two other preliminary points before turning to these questions. First, the less federal policy on waste incorporates widely-supported settlements of major national disputes, the more difficult will be the job of site-specific processes such as consultation and concurrence. That is, some issues are "generic" and of broad national interest--factual and normative questions such as how "safe" and reliable a particular type of facility is, what safety standards are to be used



at all facilities, how wastes are to be distributed around the country, federal policies on compensation. A general rule-of-thumb is that the less these "generic" issues are resolved in national forums, and resolved to the satisfaction of major interest groups, the more such disputes will be injected into site-specific discussions. That is, critics will want these national issues discussed and settled in some forum, and will intervene and even seek to delay site proceedings if the issues have not been resolved earlier.<sup>31</sup>

Second, to date most discussions of how to implement consultation and concurrence have focused on what its formal features should be--such as what issues it should address, who should speak for the federal government and who for the states, the rights of potential host and affected states, and, of course, formal procedures for resolving federal-state impasses. Several good discussions of these questions and associated options are now available.<sup>32</sup> But while these questions are crucial, they also should be analyzed in terms of what tasks C&C will face, particularly which verification and negotiation tasks are likely to fall to it instead of to other conflict-resolution mechanisms. The following section is a preliminary attempt to such an analysis.

#### B. Congress and S. 2189

Two particular questions can be asked of a Congressional nuclear waste bill:

- How much does it reflect a "working agreement" among major parties, especially the industry, active state officials, and influential critics? That is, how far does the bill's

legislative formula itself go toward resolving current disputes over values and facts? How far does it go toward establishing a widely-supported procedure for resolving remaining disagreements?

- Also, would it make the job of a consultation and concurrence process easier or more difficult than the situation C&C efforts now face?

Since S.2189 passed the Senate in 1980<sup>33</sup>--the first comprehensive nuclear waste bill to be approved by either House--let's ask these questions of it. First, its technical/programmatic strategy for high-level wastes calls for the relatively rapid development of away-from-reactor (AFR) storage facilities and for a monitored long-term retrievable storage facility; it also calls for continued research on geological disposal. Industry sources like these provisions<sup>34</sup> but environmentalists, the federal Interagency Review Group, and the State Planning Council all have called for a program that emphasizes geological disposal rather than monitored storage.<sup>35</sup> States in particular seem concerned about how long "temporary" storage in either an AFR facility or a monitored unit might last. If these provisions of the bill become law, a key dispute between the states and the federal position (as reflected in the bill) will remain unresolved, complicating the job of C&C by adding one more subject that requires negotiation.

Second, passage of S.2189 may require that more facilities be built than might be required by a geological disposal strategy--increasing the number of sites C&C processes must address. For instance, environmentalists envision fewer AFR's and no monitored facility. However,

the construction of one monitored facility may delay the number of permanent repository sites needed, at least in the short term. In the short term, then, this strategy might make C&C's task easier.

Third comes the bill's legal/procedural framework of consultation, state opportunity to object, and Congressional resolution of state-DOE stalemates. It has drawn little criticism and much support. Even the State Planning Council rejects the idea of an outright state veto and calls for Congress to settle these stalemates, though the SPC's recommended procedure differs somewhat from the bill's.<sup>36</sup> The bill also would facilitate the consultation and concurrence process by giving DOE formal authority to enter into C&C agreements and by extending the life of the SPC.

Finally, the programmatic and procedural sections of the bill dealing with low-level nuclear waste are in line with recommendations from the State Planning Council and the National Governors' Association. They have encountered no substantial criticism.

The most controversial sections of the bill, then, deal with the AFR's, with the monitored storage facility, and with the rapid timetable for building both of them. The assumption of the nuclear proponents who support this approach is that the sooner new waste facilities are constructed, the sooner public support for nuclear power in general will increase.<sup>37</sup> However, this assumption is not proven and in fact may be wrong. Environmentalists and state officials will be wary of this "retrievable storage" strategy and perhaps hostile enough towards it that they will actively oppose these facilities and

keep the waste controversy very much in the public eye. Moreover, the history of the last serious attempt to adopt retrievable storage-- the Retrievable Surface Storage Facility proposal of the early 1970's-- provides little confidence that public groups will support the idea now.<sup>38</sup>

S.2189's advocates seem to want to "stop the endless debates" and "get on with the job" of building new facilities to hold high-level waste. Thus they support the idea of stipulating through legislation what will be built, when it will be built, and directing DOE to pick sites and start design work. Their attitude is understandable, but their confidence in their ability to settle matters may be seriously misplaced.

This kind of "decision-forcing" strategy may "work" in some energy debates. For instance, in 1976 there were three competing proposals for how to transport Alaskan North Slope natural gas to the lower forty-eight states. Congress saw the prospect of long, drawn-out government proceedings on which proposal to approve and passed the Alaskan Natural Gas Transportation Act, directing the relevant agencies to cooperate and setting a firm schedule by which the government would decide if any of the proposals should be approved and, if so, which one. The process "worked" in the sense that a firm, documented, and widely-supported decision was made and made according to the law's timetable.

But it "worked" largely because certain "preconditions" for quick political decision-making were present: a clear set of gas transportation

options, exhaustive data on these three competing options, a relatively clear idea of the particular safety and environmental risks associated with each proposal, no perceived need for large amounts of additional research and development, clear political information on who supported each option, a clear understanding of who would build and operate the gas transportation system, general agreement on which safety criteria should apply and who should regulate any complete system, and a sense of urgency about the need to consider new sources of natural gas. Given these factors, a broad consensus in favor of deciding the transportation issue developed relatively soon. It is only because of this consensus that the bill passed Congress so easily, and only because of the consensus, the abundance of information, and the clear political positions (which facilitated bargaining) that the Congressional timetable could be met.

<sup>Not</sup>  
It is clear that the equivalent "preconditions" for making nuclear siting decisions now exist. S.2189's "decision-forcing" strategy might not work. If not, then the verification and negotiation tasks falling to those C&C processes handling AFR's and the monitored facility would be enormous, and perhaps impossible to perform in the timeframe envisioned by the bill.

#### C. C&C's place among the other non-Congressional mechanisms

Again, the other mechanisms are the State Planning Council, DOE programs for public participation and for research and development, federal interagency committees, and NRC rule-making. The questions here are: Who is now doing what in terms of verification and negotiation?

In particular, which of these tasks are falling to C&C, either by design or default? And which of these groups are best-equipped to handle verification and negotiation tasks beyond those they now have? The answers to such broad questions are necessarily speculative.

Verification. DOE research and development programs remain crucial. Again, without sound and well-documented research findings, technical uncertainties, factual disputes, and safety concerns will remain high. This is not a task that procedural mechanisms such as C&C or SPC deliberations can perform. The Nuclear Regulatory Commission can perform research of its own and take up some of the slack if DOE research programs produce unconvincing or inconclusive results.

Comments on EIS's and the national plan, and DOE's response to these comments, will play a big role in either verifying or challenging DOE's assertions about the safety of its proposals. The more difficulty DOE has with establishing its credibility through these forums, the more the burden of verification/non-verification will fall on consultation and concurrence channels. How NRC conducts its licensing hearings will have a large impact on how much the public trusts the Commission's judgments of the safety of DOE designs. And of all of the non-DOE forums, the NRC and the U.S. Geological Survey--the latter acting through the interagency process--have the most technical capability and thus the greatest capacity to address scientific and technical questions. The USGS role could be particularly important, since it is a high-reputation agency whose strength lies in one of DOE's most-criticized areas--the geology and hydrology of mined repositories.

However, its ability to evaluate DOE's engineering is limited and the NRC will not formally review a DOE repository design until after a host state is asked for its views. In political terms, evaluations of the site-specific technology will fall primarily to state officials and the C&C process.

Negotiation. The burden of proposing "solutions" to those generic policy issues not previously resolved by Congress will fall on the Energy Department, the federal interagency process, and the new State Planning Council. NRC is limited to passing judgment on the technical and related merits of proposals, and in any case lacks the political expertise and legitimacy to be a forum for arranging bargains on such matters as the distribution of wastes, compensation, and so forth. The exception is that it can set conditions on a license, creating the possibility of some informal negotiation between DOE and the states over safety features. Consultation and concurrence may prove to be an excellent mechanism for arranging deals for specific repositories, but its organization on a state by state basis makes it ill-equipped to facilitate bargains on generic national issues.

Arranging bargains on these generic matters requires certain preconditions: the agency must have the organizational resources to solicit and analyze the value preferences of a large number of groups; the political skill necessary to arrange proposed deals; political legitimacy; and the influence over programs and budgets to help translate bargains arranged into actual policy.

DOE's own planning operation is one candidate for this task of

facilitating negotiations and conflict-resolution. Does it have the necessary preconditions? The answer is an unqualified "maybe." The new national plan could serve as an appropriate vehicle. Through it, DOE has the opportunity to raise important generic issues, make tentative recommendations, solicit broad state and public comment, and suggest new policies aimed at gaining wide public support. Certainly some of the necessary preconditions exist here. The Department has great organizational and technical resources, and the various interest groups surrounding it are well-organized and can present cogent statements and recommendations. But the area of "political skill" may pose a problem. In the first place, extraordinary "skill" is required to get bargains in an area marked by political polarization and few incentives to resolve value differences quickly. Second, it is not clear that the Department has the motivation or the skill to act as something of a "neutral" broker of political interests. This is not meant as a criticism of the Department; rather it was created to be one kind of agency--a technical one charged with developing certain programs--not as a "brokering" entity.

The Department does have the legitimacy to address these issues and to recommend policies and legislation regarding them. However, some critics may charge that while it now has formal legitimacy, it lacks real credibility. The question of whether the national planning process will have real influence over policy also remains open, largely because of the unresolved issues of what level of detail it will have, how it will tie into the budget and legislative processes, and whether



Congress will be influenced by it.

The interagency approach was used recently, of course, to develop President Carter's policy on nuclear wastes. In the process the Interagency Review Group served as a forum for reconciling the views of DOE with those of other major federal agencies. The limitation of this approach, though, is that it requires great time and effort. It simply cannot be used very often, though a continuing interagency group--such as the one that now exists--can usefully transmit information and comments. It is likely to be most useful for scientific and site-related matters, less useful for other issues such as financing and compensation.

The present, and possible future, role of the State Planning Council is an interesting subject. To date the Council has taken a more active and expert role than might normally be expected of a part-time group of busy people, served by a very small staff of short-term detailees. Yet the Council had great influence over the low-level waste sections of S.2189, has lobbied the House and Senate on a range of issues, and has influenced DOE actions relating to consultation and concurrence. Several factors seem to have helped the Council: a credible and influential set of members; experienced staffers; an ability to draw upon the work of the National Governors' Association and the National Conference of State Legislators; high visibility and good access; a willingness to be active; and frequent meetings and timely advise to Congress and DOE. So far the Council has served primarily as a vehicle for communicating state views to the federal actors.

The Council seems reluctant to take a formal, official stand on issues that the states have not debated and formed a consensus on. This point suggests that if the Council wants to take the lead in resolving important generic issues, it might do so by first raising these matters with the Governors' Association and the Conference of State Legislators, encouraging them to debate the issues, and then communicating the recommendations to Congress and DOE.

In the same way, the Council might ask the states what kind of C&C process they want and then make appropriate suggestions to the Energy Department. Possible subjects for discussion might include what kinds of experts the states feel they need and want DOE to fund, what the states feel are the greatest unresolved factual questions, and so forth. Such activities would complement the Council's present work in developing "road maps" to guide consultation and concurrence during the various phases from site exploration to site selection to construction, operation, and decommissioning.

#### D. Organizing consultation and concurrence efforts

Finally, there is the question of what features a consultation and concurrence process needs if it is to foster dispute-settling negotiations in this particular polarized political climate. While any answer is necessarily speculative, I would like to mention three points.

First, a clear legal separation should be made between the different stages of the repository siting process, particularly between the site exploration stage and the site selection stage. This

separation will guarantee that formal legal proceedings and separate informal negotiations occur before the Department selects a site. To the degree the Department lacks the legal authority to offer such assurances, it should seek that authority. Otherwise, getting permission for even site exploration and characterization will be difficult. The Swedes have encountered little opposition to their Stripa mine experiments partly because government agencies generally are more trusted there but also because of clear assurances that the site would not be automatically turned into a permanent repository.

Second, C&C process negotiations should involve all key state and federal decision-makers or their staffs. Regardless of any formal DOE-sponsored discussions, final political decisions about a proposed repository will be made like any other major policy decision: by bargaining among governors, top state legislators, senior bureaucrats, Congressmen, the White House, and major interest group leaders. Failure to include these people with the final authority in on-going C&C discussions could jeopardize the federal-state agreements reached.

Third, perhaps the most important question about consultation and concurrence is not how discussions with the states will be organized but rather how the Energy Department will structure itself to solicit, absorb, and use the information gathered. In the absence of conscious efforts to the contrary, it is possible that the C&C process will be almost completely separated from programmatic and budgetary decision-making. This separation is particularly possible because of the decentralized way in which various DOE branches and laboratories

conduct site selection and engineering design activities. For instance, insights from one state about which technical questions are politically important there--and perhaps elsewhere--and warrant further investigation may never reach an engineering team doing relevant research in a distant national laboratory.

The proposed national plan may or may not serve as an effective mechanism for integrating C&C findings with the rest of the program, though as we saw earlier it is not even clear how the planning process will be linked with general policy-making, let alone with consultation and concurrence efforts. In any event, the question of how to connect C&C efforts with the rest of DOE's waste management program deserves further attention.

#### IV. Conclusion

This paper has tried to analyze the unusually complex political disputes that now exist in nuclear waste politics, and has suggested that a strategy of "verification and negotiation" is an effective way to implement consultation and concurrence. That is, such a strategy is likely to help resolve the disputes and build agreement on policy and sites.

Special attention should be given to how consultation and concurrence activities will fit in with other efforts to settle waste management conflicts. For instance, having good research results to "verify" is an obvious prerequisite to any attempts at "verification"; at the same time, early C&C discussions can help identify exactly what further

research is needed.

In the final analysis, C&C should be seen as a forum in which the Department of Energy can learn of state concerns, discuss options, and gradually develop much-needed trust and accommodation. Strategies for implementing consultation and concurrence should be designed accordingly.<sup>39</sup>

## V. References

<sup>1</sup>Frederic A. Morris, The Federal Legal Framework for High-Level Waste Management, Report BHARC-311/80/009, (Seattle: Battelle Human Affairs Research Centers, March 31, 1980), especially pp. 29, 31.

<sup>2</sup>During the S.2189 debate the Senate voted against giving the states an absolute veto over repositories within their borders. Senator Hatfield seemed to sum up the prevailing view when he said,

I have lately rejected the idea of a simple "State veto" provision, in that participation in all phases of the planning and establishment of these facilities is the key. Simply allowing the State to say "No" is simply inviting nothing but "No's."

Congressional Record, July 28, 1980, p. S10006.

<sup>3</sup>President Carter, "Message to the Congress of the United States," February 12, 1980, p. 2.

<sup>4</sup>S.2189, 96th Congress, Title IX. Passed by the Senate on July 30, 1980.

<sup>5</sup>Interagency Review Group on Nuclear Waste Management, Report to the President, (Washington: NTIS, March 1979), p. 95.

<sup>6</sup>Randall F. Smith, Federal-State Relationships in Nuclear Waste Repository Siting, Report B-HARC-311-026, (Seattle: Battelle Human Affairs Research Centers, September 1979), p. 51.

<sup>7</sup>Cited in a statement by Senator Percy, Congressional Record, July 28, 1980.

<sup>8</sup>DOE Under-Secretary Dr. Worth Bateman has put the matter this way:

We have proposed a consultation and concurrence effort to obtain state cooperation during Phase 1 [site identification and characterization] and throughout the process.

Statement before the House Committee on Interior and Insular Affairs, June 28, 1979.

<sup>9</sup> Senator Pete Domenici (R-N.M.), one of the "fathers" of the C&C idea, said this during the debate on S. 2189:

I also arrived at the conclusion that we ought to strive to provide a mechanism for both the Federal Government acting through whoever is designated--in this case, the Secretary of energy, acting for the President--and the States so that neither could act arbitrarily and get away with it. I think that is really the clue. That is both real and perceived arbitrariness. Real arbitrariness is dictatorial on the part of the national Government and is an absolute and, without a factual basis, veto on the part of the States. Both of those are arbitrary types of acts...

That, to me, is the essence of concurrence and consultation. It does not mean that either side has any veto authority. It says that there is an orderly procedure for resolving disputes, and that eliminates, as I see it, arbitrariness on either side of this question.

Congressional Record, July 28, 1980, p. S10003.

<sup>10</sup> Rock Reiser, et. al., Consultation and Concurrence, Workshop Proceedings, The Orcas Meeting, Eastbound, Washington, September 23-26, 1979. See for instance p. 4.

<sup>11</sup> For an analysis of the non-radiological impacts, the growing public demand for better assessments of these demands, and some suggestions see Gene I. Rochlin, The Role of Participatory Impact Assessment in Radioactive Waste Management Program Activities, Report IGS/RW-002F, February 1981.

<sup>12</sup> Recent research studies suggest that people regard nuclear waste repositories as more risky than other kinds of facilities. For an excellent summary, see Randall Smith, Problems of Waste Repository Siting: A Review, Report B-HARC-311-027 (Seattle: Battelle Human Affairs Research Centers, September 1979), pp. 3-9.

<sup>13</sup> Gerald Garvey, NWTS Policy and Public Choice, ONWI/SUB/78/E512-01200-1, January 1979, pp. 37-38.

<sup>14</sup> For a good short history of U.S. nuclear waste programs and public views of them, see Daniel S. Metlay, "History and Interpretation of Radioactive Waste Management in the United States," in W.P. Bishop, et. al., Essays on Issues Relevant to the Regulation of Radioactive Waste Management, NUREG-0412 (Washington, D.C.: U.S. Nuclear Regulatory Commission, 1978) especially pp. 5-6.

- <sup>15</sup> General distrust of government played a role in local opposition to the proposed Waste Isolation Pilot Plant (WIPP). See Richard Rhodes, "Waste of the Pecos," Playboy, August 1979, p. 206.
- <sup>16</sup> Emilio E. Varanini, III, "Aspects of Demonstrating Nuclear Waste Disposal," in Waste Management 1979: The State of Waste Disposal Technology and the Social and Political Implications, Proceedings of the Symposium on Waste Management at Tucson, Arizona, Feb. 26-March 1, 1979, pp. 57-58.
- <sup>17</sup> Chris C. Demchak, Complexification and Organizational-Institutional Design: The Case of the U.S. Radioactive Waste Program, Report IGS/RW-004, November 1980, and Gene I. Rochlin, The Role of Participatory Impact Assessment in Radioactive Waste Management Program Activities, Report IGS/RW-002F, February 1981.
- <sup>18</sup> For a discussion of how one Interagency Review Group advisory committee handled disputes over geological matters, see Rochlin, Role of Participatory Impact Assessment, pp. 44 ff.
- <sup>19</sup> "TMI Area Fear Baffles NRC", San Francisco Chronicle, March 25, 1980, and "TMI to Vent Gas Tomorrow," San Francisco Chronicle, June 27, 1980.
- <sup>20</sup> The siting jury idea is from Kai N. Lee, "A Federalist Strategy for Nuclear Waste Management," Science, 208 (May 16, 1980), pp. 679-684. While I am personally skeptical about this proposal, it is an important and innovative idea that deserves careful consideration.
- <sup>21</sup> For a discussion of "partisan analysis," see Charles E. Lindblom, The Policy-Making Process, (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968), pp. 65-68.
- <sup>22</sup> Nancy E. Abrams and Joel R. Primack, "Helping the Public Debate: The Case of Radioactive Waste Management," Environment, 22: 3, (April 1980), pp. 14-20, 39-40. Also see, Nancy E. Abrams "Nuclear Politics in Sweden," Environment, 21: 4 (May 1979), pp. 6-11, 39-40.
- <sup>23</sup> State Planning Council on Radioactive Waste Management, Docket Book, Fourth Meeting, August 28, 1980, p. B-21.
- <sup>24</sup> Garvey, NTWS Policy, pp. 48-49.
- <sup>25</sup> Ibid., p. 51.



- <sup>26</sup> I am grateful to Professor Todd La Porte, University of California at Berkeley, for this and other points mentioned in this section of the paper.
- <sup>27</sup> Again, the desire to avoid such stalemates was a prime motivation behind IRG support of the consultation and concurrence approach.
- <sup>28</sup> From a conversation with Professor La Porte.
- <sup>29</sup> The term "political learning" is from Hugh Heclo, Modern Social Politics in Britain and Sweden, (New Haven: Yale University Press, 1975).
- <sup>30</sup> State Planning Council, Docket Book, Fourth Meeting, p. B-5.
- <sup>31</sup> However, while helpful forums for addressing "Generic" issues should not be considered as a substitute for site-specific proceedings. For a discussion of this subject, see Steven Ebborn and Raphael Casper, Citizen Groups and the Nuclear Power Controversy: Uses of Scientific and Technological Information (Cambridge, Mass.: The MIT Press, 1974), pp. 153-154, 256.
- <sup>32</sup> Two excellent discussions of the issues involved in implementing C&C are Smith, Federal State Relationships, pp. 38-60, and, State Planning Council, Docket Book, Fourth Meeting, pp. B-15 to B-25.
- <sup>33</sup> For a good summary and history of S. 2189, see Ann Pelham, "Senate Passes Nuclear Waste Storage Bill," Congressional Quarterly, August 2, 1980, pp. 2163-2165.
- <sup>34</sup> *Ibid*, p. 2163.
- <sup>35</sup> Resolution No. 4-1 of the State Planning Council says this about the question of interim storage versus permanent disposal:
- The State Planning Council, recognizing the necessity and utility of interim storage for the short term as an important component of the overall high-level waste management program nonetheless believes the primary emphasis of the National Program should be on the permanent disposal of high-level wastes, so that as soon as possible they are isolated from the biosphere where they pose no significant threat to public health and safety.

<sup>36</sup>For instance Senator Henry Jackson made this argument during the S.2189 debate:

In view of our need to expand the use of nuclear energy in the United States I believe it is essential to demonstrate a workable method for the disposal of high level waste at the earliest practicable time. Thus, S. 2189 has been fashioned to include a concept which we know how to do today for disposing of high level waste as well as spent fuel.

I urge my colleagues who believe that nuclear power is an essential part of our national energy mix to support the committee's bill and to cast a dubious eye on amendments to the bill which offer the prospect of endless delay in resolving these important issues. The public support for nuclear power is contingent upon resolving in a safe, but timely way, their concern with regard to storage of spent fuel and disposal of high level waste.

<sup>38</sup>For a short history of the RSSF proposal, see Metlay, "History and Interpretation," pp. 6-7.

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