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THE U.S. DEPARTMENT OF ENERGY'S
ATTEMPT TO SITE THE MONITORED
RETRIEVABLE STORAGE FACILITY (MRS)
IN TENNESSEE, 1985-1987

by

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The Nevada Agency for Nuclear Projects/Nuclear Waste Project Office was created by the Nevada Legislature to oversee federal high-level nuclear waste activities in the state. Since 1985, it has dealt largely with the U.S. Department of Energy's siting of a high-level nuclear waste repository at Yucca Mountain in southern Nevada. As part of its oversight role, NWPO has contracted for studies designed to assess the socioeconomic implications of a repository and of repository-related activities.

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**The U.S. Department of Energy's Attempt to Site the Monitored
Retrievable Storage Facility (MRS) in Tennessee, 1985-1987**

The Nuclear Waste Policy Act of 1982 and the MRS Facility

This report is concerned with how America's public sector is handling the challenge of implementing a technical, environmental policy, that of managing the nation's high-level nuclear waste, as reflected in the attempt of the U.S. Department of Energy (DOE) to site a Monitored Retrievable Storage Facility (MRS) for high-level radioactive waste in Tennessee. It has been observed that "radioactive wastes present some of societies most complex and vexing choices."¹ There is deep and abiding disagreement about almost every aspect of radioactive waste management (RWM). How, when, where, and by whom should radioactive waste be disposed? What are the risks inherent in RWM and who should bear them, at what cost and at whose cost? What are the benefits in RWM and who should receive them? Thus,

For one reason or another, a sustained and definitive RWM policy has been an elusive goal for our nation since the beginning of the nuclear age. An atmosphere of contentiousness and mistrust among the interested parties, fed by a long history of policy reversals, delays, false starts, legal and jurisdictional wrangles, and scientific overconfidence, and played out against the background of public concern with nuclear power and weapons issues generally, has dogged society's attempts to come to grips with the radioactive waste management problem.²

A major step in the nation's management of nuclear waste was taken in 1982 with the passage of the Nuclear Waste Policy Act which established a national policy for the safe storage, transportation, and disposal of high-level nuclear waste. Under the NWPA, (DOE) is charged with two major responsibilities: (1) to develop, site, construct, and operate deep-mined

geological waste repositories; and (2) to perform research, development, and demonstration of the disposal of spent fuel and high-level waste."³ The NWPA directs the Department of Energy to undertake, and submit for the consideration of the Congress, a study of the need for and feasibility of one or more MRS facilities for the spent fuel from civilian nuclear reactors. In June 1983, DOE submitted a report to Congress that concluded that an MRS proposal could be prepared based on "currently mature engineering and design practices without additional research and development."⁴ The detailed MRS proposal required by the NWPA is to be "site specific and include at least three alternative sites with at least five designs based on alternative site/concept combinations."⁵ Before such a facility can be constructed DOE must first obtain specific congressional authorization. Toward that end, the DOE between 1983 and early 1985 evaluated sites in the central eastern region of the United States as candidates for the MRS facility. The evaluated sites included those "previously planned and those which 'qualified' for nuclear activities—such as sites owned by DOE or previously docketed by NRC."⁶ The evaluations were based on existing environmental documentation and data for the sites which was, in DOE's view, "of high quality and relevant to construction of a nuclear facility."⁷ Thus, on April 25, 1985, the Secretary of Energy identified the three candidate sites the agency expected to include in its MRS proposal to Congress. All three sites were in Tennessee, with the "preferred" location identified as the former Clinch River Breeder Reactor site in Oak Ridge. The two alternative sites were the DOE Oak Ridge Federal reservation in Roane County and TVA's cancelled nuclear power plant site in Hartsville. In identifying the three candidate sites, the DOE also announced its intention to submit its full MRS proposal to the Congress within nine

months, in January of 1986. In making this announcement the DOE asserted that, during the interim period before its submission to Congress, it would:

[K]eep all segments of the public informed of decisions and supporting analyses leading up to the proposal to Congress in January 1986. This includes working closely with potentially affected States and localities once they are identified and assuring that they have ample opportunity to express their views to Congress.⁸

The Secretary of Energy's announcement immediately confronted the state of Tennessee, and several of its localities, with the problem of how to respond to the proposed siting of a high-level radioactive waste facility within its borders. Because the NWPA extended to a state the right to "disapprove" of the siting of an MRS facility, subject to later congressional override of the state "veto," Tennessee was faced with a critical decision: would it accept or reject the MRS proposal for any or all of the proposed sites and upon what basis? Recognizing this, and as part of its attempt to ensure that the state and localities affected by the MRS proposal would have the opportunity to express their views to Congress, the DOE initiated a series of briefings by its staff for state and local officials, as well as the general public, in Nashville, Oak Ridge, and Hartsville. Moreover, the DOE offered financial support to Tennessee to fund a state review of the proposal.

What followed was an intensive period of intergovernmental efforts and negotiations that included significant state and local attempts to incorporate citizen participation within the review process. What began as an ostensibly open and cooperative undertaking between national and state authorities eventually became contentious, until finally the governor announced the state's opposition to the proposal. At the same time, the Oak Ridge community established a more cooperative relationship with DOE, and eventually presented the federal agency with a set of conditions under which the MRS—so firmly

rejected by the state—could be made acceptable to the community in which it was to be constructed. After a fifteen month delay caused by litigation brought against it by Tennessee, the DOE presented its MRS proposal to the Congress in March 1987. The proposal, however, was rendered moot by the "mid-course" correction in the NWPA undertaken by the Congress in December of that year.

Case Design and Methods

This study examines the MRS case, from the 1985 DOE decision to proceed with an integrated MRS proposal to the passage of the Nuclear Waste Policy Amendments Act of 1987. It is based on the premise that the Tennessee MRS case, as it unfolded and was finally settled in the national legislature, provides a valuable corpus of experience to inform and guide those, operating at all levels in the federal system, in the continuing effort to implement the NWPA. That is, we contend that the fashion in which the DOE interacted with subnational governments and groups in Tennessee, how the DOE reacted to the ultimate state and local reviews of its MRS plan, the extent to which the federal agency incorporated subnational views into the proposal eventually presented to the Congress, and the final congressional response, contribute important insight into the problems and prospects for future efforts to establish an effective national high-level radioactive waste management system.

To chronicle the course of events, we systematically monitored media coverage of the MRS controversy, tracked relevant congressional hearings, reviewed documentation provided by agencies and groups involved in the case, and conducted personal interviews with virtually all of the key actors. Over

the course of two years the authors interviewed twenty-eight participants in far-ranging sessions that lasted between thirty-minutes and two hours.

The DOE MRS Proposal

As reflected in its initial draft Mission Plan, DOE originally conceived that the Monitored Retrievable Storage facility would serve as a backup in the event of significant delays in the geologic repository program. The Department planned to build and operate an MRS facility to store spent nuclear fuel until the deep repository was ready to receive this waste material.⁹ Over the next year, however, the DOE developed a plan for what it called an "integrated waste-management system" consisting of both storage and disposal components. As part of the "integrated system" an MRS facility would now perform "most, if not all, of the waste-preparation functions before emplacement in a [deep geologic repository]."¹⁰ Thus, the MRS would have as a primary role in the system the preparation of nuclear waste before emplacement in the permanent repository; its role in providing storage, unlike that originally envisioned, was now secondary—although DOE still planned on using the MRS for storage in the event that the deep repository was delayed. In this way the "schedule for accepting waste from the utilities is separated from the capability to emplace the waste in a repository."¹¹ The MRS could begin operation, according to the new DOE plan, by 1996—a year in advance of the waste-acceptance date specified in the Department's contracts with the utilities, leading to the point that by 1998 "the system could be accepting waste at a rate close to the rate of spent-fuel generation, thus curbing the growing inventory of spent fuel at reactors while making major progress in the implementation of permanent disposal."¹²

By April 1985 the DOE Office of Civilian Radioactive Waste Management (OCRWM) had developed three options in its efforts to develop a national nuclear waste management system: (1) A system without an MRS facility in which spent fuel was directly sent to the deep geologic repository for processing and storage; (2) a system with an MRS facility as a backup storage site in the event of delays in putting the permanent repository into operation; and (3) a system with an "integrated" MRS facility performing both processing and storage operations.¹³ The DOE, in promoting its plan for an integral MRS as the preferred configuration, emphasized enhanced system performance:

The integral MRS facility enhances overall system performance by adding flexibility in the functions necessary for disposal. This added flexibility, in comparison with a system without an MRS facility, results from the separation of waste acceptance, transportation, and packaging from the waste-emplacement function. Also, the MRS facility provides the capability for a storage function that can be used to serve a variety of system needs. . . . By separating the pre-waste-emplacement functions from the repository, the integral MRS facility would provide an early focus for the DOE to develop and integrate these key functions. This focus would enable the total system to be operational on or before 1998, as mandated by the Act, and will ensure early productivity for the resources of the Nuclear Waste Fund.¹⁴

The NWPA directed that, in addition to an MRS need and feasibility study, the DOE include in its MRS proposal to Congress at least three alternative sites and a recommendation as to the preferred site.¹⁵ Having decided to pursue the integral MRS option, DOE proceeded with the site screening and evaluation process so that a candidate site could be designated for congressional approval. According to the DOE, the primary considerations in identifying a preferred and two alternative sites for an MRS facility were to identify sites where the facility could be constructed (1) with "minimal adverse impacts on the local community or environment," (2) at a location that would enhance its role as an "integral part of the federal nuclear waste

disposal system," and (3) to allow "timely, cost effective selection."¹⁶ These considerations led DOE to focus on sites in the East-Central region (where the preponderance of civilian nuclear reactors are located), having at least 1100-acres (to accommodate estimated processing and storage requirements), and which were owned by DOE or had already been docketed by the NRC for licensing as nuclear facilities (thus allowing the use of existing data for site approval).¹⁷ Eleven such sites were identified and these were then "thoroughly analyzed by a task force of specialists in eight areas important to evaluating site suitability."¹⁸ The evaluations were undertaken from mid-December 1984 through March 1985 using "only materials available in the open literature."¹⁹ The process used by DOE for site selection constituted the database for the required "Environmental Assessment" (EA) to accompany the proposal to Congress. In presenting its report on site screening and identification, the DOE noted that if Congress authorized the MRS, "some new or confirmatory field data will be required for each site prior to completing an Environmental Impact Statement (EIS) and prior to submittal of a license application to the Nuclear Regulatory Commission for construction and operation of MRS."²⁰

The director of OCRWM at the end of the process identified the Clinch River Breeder Reactor site, the DOE Oak Ridge Reservation, and the Tennessee Valley Authority Hartsville Nuclear Plant site (all located in Tennessee) as the preferred and alternative sites for the integral MRS facility to be proposed to Congress in January 1986. It was noted also that the director's judgment "could change based on information to be developed between now [April 1985] and January 1986."²¹ Moreover, now that the site identification had been completed, the DOE observed that:

It is expected that the State of Tennessee will reach independent judgments about the Department's program and rationale for an MRS facility. The Department will help facilitate independent state review by a program of grants and extensive information transfer. The scope and schedule of this program will be developed cooperatively with Tennessee. Through this interaction, the Department will work to resolve any questions or concerns by Tennessee regarding MRS authorization or deployment. A formal consultation and cooperation agreement will be negotiated with Tennessee should Congress authorize construction of the MRS at Clinch River or one of the alternative candidate MRS sites.²²

Thus, the DOE had decided to proceed with an integral MRS facility as part of its national nuclear waste disposal program and had identified three candidate sites, all in Tennessee, for its construction. Congressional approval of the MRS program, and the specific location of the MRS facility would be sought within eight months, giving the state of Tennessee somewhat less than three-quarters of a year to complete its review and evaluation of the proposal.

DOE's Announcement and Tennessee's Response. The Secretary of Energy's MRS announcement was accompanied by a briefing for local officials and press conference in Oak Ridge. During the briefing for thirty-five city and county officials from the Oak Ridge area, DOE representatives first explained the nature of the facility and its role in the nuclear waste management system. The meeting was then opened for questions from the officials. From DOE's standpoint the major issue was "an equitable financial arrangement between the city of Oak Ridge (and neighboring communities) and the Federal Government."²³ In the ensuing question period most of the questions from local officials dealt with financial issues, with some questions regarding environmental, transportation, and safety concerns also being raised.²⁴ The two hour press conference, held later, proved much different. Unlike the briefing session where the primary focus was upon financial compensation and impact concerns, the questions posed by the media focused primarily on the impact of

transportation of nuclear waste materials in the state, environmental effects, the need and feasibility of the proposed facility, and siting process that had produced all three sites in Tennessee.²⁵ The following day in Nashville, DOE representatives briefed the Commissioner of the Tennessee Department of Health and Environment and his staff on the MRS project. Shortly thereafter additional DOE briefings were provided for officials in the Hartsville area, as well as members of the state legislature and key state executive officials and staff.

The initial reaction of the state, according to two high level executive branch officials, was "surprise and consternation."²⁶ Shortly after the DOE announcement Governor Alexander directed that the executive branch undertake a comprehensive review of the MRS proposal. This review was to provide the basis upon which, by the end of the year and before the DOE submitted its plan to Congress, the governor would make an informed decision about whether to support or oppose the MRS. Governor Alexander made clear that he did not want the state to simply engage in the "Not In My Back Yard" (NIMBY) attitude that typified local reaction to proposed nuclear facilities. Recognizing that Tennessee had an obligation to the larger national interest in contributing to the development of an effective nuclear waste disposal system, Alexander indicated that if the MRS facility could be independently established as necessary and feasible, he would support its construction within the state. As one high-level administrator remarked: "He [Alexander] is a very unique guy, so his first impression was, if this thing is needed and we need to do this for the nation, then we need to stand up and do it."²⁷ The governor then turned to his Safe Growth Cabinet Council (SGCC) to organize a multiagency

review of the MRS proposal, and to perform an independent technical assessment of the assumptions upon which the DOE program was based.

The Safe Growth Cabinet Council. Early in his second term Governor Alexander recognized the ubiquitous tendency toward fragmentation and bureaucratic in-fighting in modern executive branch operations that can hamper gubernatorial effectiveness. A multiagency task force was therefore instituted to overcome the tendency toward disjointed executive activity in the critical areas of economic development and environmental protection. The resulting task force included cabinet officers from six state departments and agencies, and a small professional staff.²⁸ As part of its overall mission to coordinate economic development and environmental protection, the Cabinet Council (SGCC) was especially concerned with coordinating state hazardous waste management activities. It was to be expected, then, that Governor Alexander turn to the SGCC and its staff to organize the state's multiagency review of the MRS proposal, and to perform an independent technical assessment of the assumptions upon which the DOE program was based.

Work on the project began almost immediately, and smoothly, because as Commissioner James Word, Chairman of the SGCC, expressed it: "There was already a relationship between the agencies [in the SGCC] so when the MRS came along we did not have to do anything special. We simply put the MRS into the same group dynamic that everything else was in."²⁹ In his charge to the SGCC Alexander emphasized that citizen participation should be a focus of the state's evaluation program.³⁰ Governor Alexander also was emphatic in demanding only analysis and information—not recommendations—from the Cabinet Council. The Assistant Director of the SGCC staff later recalled that:

Neither the Safe Growth staff or the Safe Growth Cabinet Council were ever asked to make a recommendation directly to the governor. Our role

was one of information collection and synthesis. We did not even prepare a single final report in which the findings of our contractors or the findings or of our executive departments could be "filtered" through the staff. Commissioner Word and the governor agreed that Alexander needed to receive the information in as pure a form as possible. So we did not interject the additional step of synthesizing and boiling down [the material] to avoid the possibility of building staff bias into the recommendations.³¹

Legislative Response. The Tennessee General Assembly responded to the DOE announcement by creating a Special Joint Committee "to study the issues involved in the selection of nuclear waste storage facility sites," and to report its findings by January 10, 1986.³² The Joint Committee took a "parallel approach" to that of the Cabinet Council and essentially "bird dogged" the executive's comprehensive review as it unfolded.³³ The committee conducted a series of public hearings, participated in the workshops and briefings on the MRS sponsored by the DOE and the Cabinet Council, and reviewed the relevant documents.³⁴ For some state officials this activity was far too passive and proved disappointing in practice:

We tried very hard to get the legislators more interested and involved in what the DOE was trying to do with the MRS, and how we were trying to evaluate it. It was . . . very disappointing because of what seemed to be a lack of interest by the Select Committee members—and even those legislators whose districts were directly involved. Rather than trying to study the situation, or trying to gather public input—in those few instances where legislators did attend public hearings—they just made clear that they opposed the MRS and told what they would try to do to stop it.³⁵

The SGCC chair, however, was untroubled by the apparent inattention of the legislative branch. Commissioner Word felt that the legislature delegated so much responsibility because its members "trusted the Cabinet Council and the evaluation process it had instituted—as well as the fact that they [legislators] assumed that we would ultimately oppose the facility."³⁶ Further, the General Assembly could afford to let the executive take the lead

on the MRS because it continued to reserve for itself the final decision as to whether or not to approve the MRS. The NWPA provided that both the state governor and the legislature had disapproval rights—subject to later congressional override.

Political Reaction. The political reaction to the DOE proposal was, to say the least, one of deep concern. Environmental groups such as the Tennessee Environmental Council (TEC) and the Tennessee Valley Energy Coalition (TVEC) almost immediately began to mobilize in opposition. The TEC in particular urged that the state undertake a comprehensive and rigorous evaluation of the MRS project. The executive director of the TEC shortly after the DOE announcement recommended to the Cabinet Council that its review include "a comprehensive assessment of the health, safety and environmental impacts of the MRS, if it is constructed," as well as a "detailed evaluation of DOE's justification for the project and of the assumptions made by the agency in suggesting the site and design which is now proposed."³⁷ By mid-summer, all three of the announced Democratic candidates in the forthcoming 1986 gubernatorial election had declared their opposition to the MRS.³⁸ During the ensuing primary campaign two of the Democratic aspirants made protecting Tennessee from a federal nuclear "dump" a major issue; the third--the eventual winner of both the primary and general elections, Ned McWherter, placed less emphasis on the matter. The Republican candidate adopted a "wait and see attitude," while maintaining a stance suggesting that he would not as governor allow harmful federal facilities into the state. Campaign staff closely tracked the unfolding state evaluation, and the Democratic candidates themselves often appeared at public meetings to express their steadfast opposition to the MRS project.

The State Evaluation Program

The state with alacrity accepted the DOE offer to provide financial aid to fund a review of the MRS proposal. In early June, 1985 the staff of the SGOC submitted a proposal for an independent evaluation of the need, siting, logistic, and design assumptions forming the basis for the MRS.³⁹ Shortly thereafter the DOE approved a \$1.4 million grant which was shared with the two affected communities; Oak Ridge and Hartsville were each allocated \$100,000 to fund local impact studies. The structure of the SGOC-MRS evaluation study is provided in Figure 1. The review consisted of four major components:

Figure 1 About Here

(1) a technical evaluation of the need and feasibility of an MRS; (2) a study of the probable effects of an MRS on the health, safety, and economy of the state and its citizens; (3) a citizen outreach and participation program to provide people with information regarding the MRS as well as to determine their views of it; and (4) a review of the legal and constitutional issues involved with the MRS project. General supervision of the evaluation was provided by SGOC which met monthly to exchange information and coordinate staff efforts.⁴⁰

The technical evaluation was conducted by the SGOC staff and a Technical Advisory Panel of twenty-one "experts recruited from the academic world, from government and the private sector, from the nuclear industry and its critics," appointed by the SGOC chairman.⁴¹ In addition, at the behest of its Technical Advisory Panel, the SGOC contracted with research centers at the University of Tennessee and Vanderbilt University to perform specialized analyses. Thus,

Before the state evaluation was complete, it involved experts from two major universities, four university based research institutes or centers, an academic consortium, TVA's technical staff and the data

management branch of a major nuclear industry. Including the Technical Advisory Panel members themselves, more than 50 senior scientists, engineers and systems analysts participated in the study.⁴²

The impact analysis was undertaken by twelve state agencies within five executive departments and two independent commissions. The agencies sought, in addition to establishing probable health, safety, and economic effects, to establish additional capital and operating costs to be incurred by the state due to the MRS facility, and additional legislative or regulatory authority that would be required to protect the health and welfare of the state.

The legal analysis was handled by the office of the state attorney general (AG). The state AG's office endeavored to "track DOE's compliance with the provisions of the Nuclear Waste Policy Act and to research legal questions which emerged in the course of the state review."⁴³ In addition to engaging in legal research, the AG's office attended the series of DOE and SGCC meetings and seminars about the MRS, and attended a variety of national legal conferences regarding hazardous waste issues.⁴⁴ The attorney general concluded soon after opening the legal review that DOE had not, as required by the NWPA, consulted with the state during the MRS site screening and selection process. When discussions with DOE attorneys failed to resolve the consultation dispute, the attorney general filed suit on behalf of Tennessee challenging the legality of the site selection process.⁴⁵

The public involvement component of the review involved the establishment of public reading rooms in Nashville, Oak Ridge, and Hartsville, where copies of all relevant DOE documents and state reports were available. The SGCC sponsored four public information meetings in August and September across the state at which DOE officials described the MRS proposal and state representatives described the state's independent review process. In early

December the state evaluation reports were added to the reading rooms and the findings were presented at additional public information hearings held around the state. Citizen opinions regarding the MRS were gathered from correspondence received by the executive branch, comments and testimony presented at public meetings and hearings, petitions, and calls made to a toll-free MRS Hotline.

The community impact reviews were conducted by task forces organized by the local governments. Oak Ridge/Roane County created the Clinch River MRS Task Force consisting of thirty-five members including local government officials and private citizens; staff support was provided by the city. The Hartsville community organized an evaluation team called the Review, Evaluation, Analysis and Liaison (R.E.A.L.) Committee. The R.E.A.L. Committee was composed of local government officials from the five counties included in the primary impact area of the MRS.

The Cabinet Council Report and the Governor's Decision

The comprehensive state review of the MRS proposal resulted in nearly 2,000 pages of reports and appendices. This material was presented to the governor, the legislative study committee, the Department of Energy, and the general public on January 2, 1986. The major findings of the SGCC report were that:

1. The DOE had not established the need for an MRS: A comparison of the integral MRS with the NO-MRS alternative, based on the original DOE criteria, showed that "an improved NO-MRS alternative could be designed to have many of the advantages and functions as DOE's MRS," and would be \$2 billion less in cost.⁴⁶
2. The DOE process by which DOE had selected its sites was flawed and improper: The SGCC concluded that the Tennessee sites "were selected for political and programmatic reasons, not for technical ones."⁴⁷ The state objected that the criteria used to evaluate sites were not given weights of importance and were based on

environmental and ecological data that was "out of date, not available, or not site specific."⁴⁸ Moreover, in the opinion of the Tennessee Attorney General, DOE had not fulfilled its NWPA obligation to consult with the state during the siting process.⁴⁹

3. The engineering and economic feasibility of a key MRS technology had not been demonstrated by DOE: Fuel rod consolidation on the scale planned at the MRS was untested and DOE would have to refine its development, demonstration, and testing to establish appropriate methods and cost-benefits of alternatives.⁵⁰
4. The direct economic benefits of the MRS were positive, but indirect costs would be excessive given public and elite perceptions about the danger of nuclear waste facilities: The Tennessee economy would benefit from jobs associated with MRS construction and operation, although most of the benefits would not be realized for ten years, as well as from tax revenues (DOE in-lieu of tax payments). These benefits would be offset in some degree by increases in state capital and operating costs associated with the construction and operation of the MRS. Because of negative perceptions of nuclear waste and nuclear waste facilities, it was expected that an MRS would adversely affect state efforts to attract business and industry.⁵¹
5. The public did not want the MRS located in Tennessee: Staff analysis of the public testimony, petitions, Hot-Line calls, and other expressions of opinion revealed that 93% of those with a view were opposed to the MRS.⁵²
6. The MRS would be a safe facility and the transportation risks were low and acceptable: The conceptual design for the MRS was deemed sufficiently safe and the radiological risk due to the transportation of spent nuclear fuel was estimated to be acceptably low for either the MRS or NO-MRS alternatives.⁵³ The SGCC, nevertheless, had "reservations" about DOE's ability to operate the facility as designed "based on past performance and . . . DOE's lack of experience as an NRC licensee."⁵⁴

Thus, the governor of Tennessee was provided with an independent state analysis of the MRS proposal, largely financed by the DOE, that was extremely critical of the need, costs and benefits of the facility—but which conceded it did not incur unacceptable danger to the health and safety of Tennesseans.

The SGCC staff in late December briefed the Cabinet Council on its findings. This long briefing included direct and detailed presentations by the contractors and departments who had undertaken independent studies. The

appearance of the contractors was to assure that the SGCC receive its information directly without any danger of staff bias through an executive report preparation process and presentation.⁵⁵

As the governor had originally requested, the SGCC made no recommendation regarding approval or disapproval of the MRS, but only offered its findings in a series of departmental, SGCC staff, and contractor reports presented at a lengthy briefing for the chief executive in early January 1986. Presentations were again made directly by several of the contractors with the governor taking special interest in the reports of the economic impact study.⁵⁶

While the SGCC evaluation raised many questions about the adequacy of DOE's preliminary analysis of the need for and feasibility of an MRS—and was extremely critical of the site selection process that placed all candidate sites in Tennessee—it nonetheless had to concede that DOE's "key criterion" in justifying the MRS was a matter of judgment. For DOE the primary justification of the MRS was that it increased the likelihood that its prospective nuclear waste management system would be successfully implemented, and as the state's Evaluation of the Need, Feasibility, and Siting of the MRS noted:

This is a matter of judgment. Reasonable people can agree with DOE and conclude that the MRS is desirable because of the programmatic benefits perceived by DOE. Other reasonable people can conclude that a properly designed ND-MRS alternative is preferable. It is highly likely that either alternative, particularly with additional testing and development, is technically feasible.⁵⁷

On January 21, 1986, Governor Alexander announced his MRS decision in Washington, D.C. meetings with the Secretary of Energy and the Tennessee congressional delegation. At a press conference later, the governor announced that, based on the state's independent evaluation of the project, the MRS

"could be operated safely, but the U.S. doesn't really need it."⁵⁸ The governor went on to promise that, if and when the DOE went to the Congress with its proposal, he would "veto the federal plans and . . . urge Congress not to override my veto."⁵⁹ Governor Alexander emphasized the importance of the SGCC report as the basis for his decision and, in justification for his negative decision on the MRS, provided his conclusions regarding the project based on the SGCC findings. The governor concluded that the MRS was simply "a repackaging plant" and chided the DOE for giving it "a ridiculous name . . . that confuses almost everyone." Alexander also admonished the nuclear power opponents who, in his view, had "given it [MRS] an undeserved reputation that scares almost everyone." Governor Alexander acknowledged that radioactive waste management was Tennessee's problem too, especially in that ten percent of the spent fuel from civilian reactors would be generated by TVA nuclear power plants. Thus, he recognized that since Tennessee enjoyed the benefits of the electricity generated by nuclear power, the state had to be concerned with the safe disposal of its wastes; especially since such waste was bound to "pile up at four TVA plants . . . and because we are so centrally located, there is no way to escape having the spent fuel shipped through Tennessee." Depending on the "U.S. Government's competence as a manager and regulator," the governor concluded, citing both the Clinch River Task Force and the REAL Committee reports as well as the SGCC evaluation, that the MRS plant could be operated safely; Alexander further found that the spent fuel could be safely transported, could not explode or be made into a bomb.

To a very significant degree, then, the governor admitted the validity of much of DOE's MRS plan. In his final conclusions, however, Alexander made clear his ultimate rejection of DOE's brief for the MRS. Alexander argued

that the MRS was "unnecessary and therefore a waste of money." Based on the comprehensive state review he concluded that the facility was "desirable, not essential," and that DOE had overestimated the need and the benefits. That is, the governor of Tennessee rejected DOE's enhanced system performance argument. Finally, Alexander rejected DOE's preferred site in Oak Ridge as being "exactly the wrong place for it." He concluded that placing the MRS there would jeopardize the state's investment in the Knoxville metropolitan region (of which Oak Ridge was a part) as a high technology magnet area for "good, new jobs." By extending the economic cost/benefit effects to a state-wide calculation, the governor in essence rejected the mitigation package envisioned by DOE, and the conditions of the Clinch River Task Force, which focused almost exclusively on the Oak Ridge community.⁶⁰

In the end, then, the DOE had established much of its case with the governor, but not nearly enough to win his support for its MRS proposal. Alexander did not challenge the siting process or feasibility of the MRS; he agreed with DOE that the plant could be operated safely and conceded the state's obligation to contribute to solving the radioactive waste problem. Ultimately, the governor's negative decision turned on the question of need for the MRS balanced against the economic costs to the state--rather than health and safety risks. Alexander's position dramatically raised the ante for MRS siting: from satisfying the local community with a compensation package, to the much more difficult, not to say expensive, problem of compensating an entire metropolitan region and probably the state as well. Thus, as one representative of the nuclear industry observes:

Assessing these [MRS] costs and impacts is relatively straightforward on a local level. But the decision on the facility will be primarily influenced at the state level. . . . At Oak Ridge, there is a local balance . . . where direct employment benefits will be substantial for

the existing population, and service and economic impacts can, without making great leaps of faith, be assumed mitigable. On the state level, however, the 600 jobs at the MRS pale in comparison.⁶¹

The DOE Response. The DOE was not swayed by the governor's decision. After Alexander's announcement the DOE announced that it would submit its proposal, along with formal review comments by the NRC, the EPA, and the state of Tennessee, to Congress on February 9, 1985. Before the DOE could make good on its intention, however, Tennessee secured a Federal District Court injunction preventing the Secretary of Energy from presenting the MRS proposal to Congress. Although the District Court's injunction was ultimately not upheld on appeal, it was another fifteen months before the DOE finally was able make its submission. During the interim the state refined its MRS evaluation, a newly elected governor declared his intention (with the support of the legislature) to veto the MRS, and the Tennessee congressional delegation prepared to battle the proposal in the Congress.

Intergovernmental Performance Evaluations

State Perspectives on the DOE's Performance. In the effort to systematically assess the MRS proposal Tennessee officials inevitably developed a state perspective on DOE's performance. Interviews with key actors in the evaluation revealed strong views on several aspects of the federal agency's performance during their interaction on the MRS. First, the SGCC staff, members of the Department of Conservation MRS Task Force, the Technical Advisory Panel, and the outside consultants, quickly concluded that the DOE had done a poor job preparing the initial justification documentation for the proposed facility. This undermined respect for DOE and inspired state staffers to subsequently scrutinize all documentation received from the

federal agency with a seriously jaundiced eye. As one top level state official viewed the material:

My perception is that the DOE's MRS proposal was really sloppy and poorly prepared, and not very well thought through. It shouldn't have been as easy for a bunch of amateurs to take it apart as it turned out to be. . . . It gave you the feeling of fragmentation, and lacked the synthesis, and integration you'd expect from a proposal that is as major a matter of national policy.⁶²

In the words of another high-level state official,

I remember taking several days to review the MRS documents and the more I read . . . the more I became concerned that the idea had not been fully developed; there was not as much substance to the need justification as there ought to have been, and there were conflicting statements in the DOE documents. It was sort of shocking that a project of that magnitude was so poorly justified.⁶³

While some in the state attributed the report's flaws to DOE's use of numerous, poorly coordinated consultants, "who didn't know what one another was doing," others thought that it simply the latest example of an all-too-familiar pattern. Thus, as expressed by one of the state's consultants with extensive experience in dealing with DOE:

My personal belief is that DOE often commissions technical studies [such as the MRS material] to try to justify their [already established] position. Their positions are determined ahead of time, the technical studies are used to back up the position, and often what happens is that the outcome is totally determined by the boundary conditions. A lot of federal agencies operate that way, but DOE is notorious.⁶⁴

Still others were considerably more charitable toward OCRWM's initial documentation, attributing what the state considered poor quality to DOE's being the victim of the "tyranny of a congressional timetable for the MRS and problems with progress in the deep repository program that necessarily limited what could be accomplished by way of justification." The bottom line, however, was that DOE's initial documentation was held in contempt by many of those involved in the state evaluation, and this created an atmosphere that later OCRWM efforts could not dissipate.

The DOE's initial briefing to state officials and their professional staff only served to exacerbate the problem. As one state staff person relates the DOE's first presentation:

The material DOE presented at the first meeting was little more than cartoons. Literally. They were line drawings and the feds told us "this is an MRS." Here we'd brought people with sophisticated science and technology backgrounds—geologists, masters-level people, ecologists, biologists, people with engineering backgrounds and economists, and a good group of applied university academic-types. The presentation was just demeaning.⁶⁵

As Conservation Commissioner Charles Howell recalled: "It took the DOE quite a long time to stop talking down to us."⁶⁶ Although in later workshops DOE personnel were perceived to take a more "collegial and respectful" stance toward their state counterparts, the unfortunate initial impression for federal arrogance was never quite forgotten.⁶⁷

Another aspect of the initial DOE presentations regarding their MRS plans that eventually offended state staffers was a sense that they had been "had." For example, during the early meetings OCRWM created an impression that its plans were "not very far along;" this made the state's experts think that they were being broat on board early enough to have a significant effect on MRS plans. DOE's credibility and good faith severely was damaged, in the eyes of certain state professionals when, only a few weeks later,

we [the state staff] received two boxes with about 50 or 60 volumes . . . containing complete architectural drawings and design specifications for the MRS facility itself—down to the last nut and bolt on every pump for every air handler in the building.⁶⁸

This was taken as evidence that the DOE did not really want, or plan to use, the contribution of the state's experts.

Some involved in the MRS case from the state end felt that, while the DOE entered Tennessee with declared intentions for complete openness and

cooperation, when it began to appear that significant questions were being raised about the enterprise, the "feds" attitude shifted:

Early on we [the state] got rather prompt answers to our questions and good responses and interchange. As it became increasingly evident that the state had some serious reservations about the MRS proposal, the level of interaction deteriorated; it took longer to get an answer; some questions [sent to DOE] were never answered.⁶⁹

The issue of whether or not the DOE was sufficiently forthcoming with information was a major sticking point for many of those involved in the state review of the MRS. At the highest levels members of the SGCC gave OCRWM very high marks for openness and a sincere desire to cooperate:

I think that DOE gave us everything they could on a timely basis, except for that part of the information that they had not yet developed. I think they did the best they could do. I could get the top officials, Rusche [Director of OCRWM] and Hilley [Assistant Director of OCRWM] whenever I wanted them, and on any subject I could get an answer. Often the answer was "I don't know." The "I don't know" frustrated our staff. But I was not because I appreciated the constraints under which they were working.⁷⁰

But, at the staff level, the perception was significantly different:

One of the strategies I think the DOE had was to try to overwhelm us with data that they provided late. The timing of it was always late so that instead of our being able to really be on top of it, and question, and get the right answers we were on the defensive. . . . we were always a few steps behind DOE. We would ask questions in July and get answers in December.⁷¹

Eventually the state resorted to formal correspondence between the chairman of the SGCC, Commissioner Word, and the Director of OCRWM, Ben Rusche. For example, in July 1985 Word wrote to Rusche urging that DOE include a full assessment of the other two nuclear waste management options (the repository only, and the repository with MRS backup), and reiterated a variety of state concerns originally expressed in earlier meetings in Nashville. Special emphasis was placed in the letter on the state's need to receive all MRS reports, documents, and other material as soon as possible—most especially

the required Environmental Assessment (EA).⁷² The Department of Conservation had been given the task of evaluating the EA, and was especially concerned because they expected that DOE was going to rely on "out of date and unreliable data" in their report to Congress.⁷³ In the third week of August, Mr. Rusche responded in a very lengthy letter to the Commissioner. The Rusche letter did not provide the requested EA information but promised that when the EA was ready it would meet the state's concerns.⁷⁴ The long delay in receiving a response, and the general nature of the response, was taken by the staff members who badly wanted the EA information as evidence of DOE "bad faith." They were convinced that DOE planned all along to hold back on key information until it was too late for the state to incorporate it into its report to Congress, when and if DOE sent its proposal to the Hill in January 1986. The DOE was widely viewed at the time as engaging in a "thinly veiled" attempt to maneuver itself into a position of decisive advantage over the state during the forthcoming congressional fight over the MRS.⁷⁵

What the staff members may not have known, however, was that DOE's cautious, limited, and long in arriving responses to this, and other letters from Tennessee, were perhaps reasonable, and not necessarily evidence of any bad faith on DOE's part—given the correspondence's second purpose. As one high level state official later reported on Tennessee-DOE relations:

I felt that we had a pretty good program of personal communication with the DOE people. I think the difficulty came about in the formal correspondence. We tried to establish a series of letters between Jim Word and Ben Rusche. In these we brought up key policy considerations, and sought to establish when we would be allowed to review key documents. Throughout the series of correspondence we were trying to establish an administrative record in case there needed to be litigation further down the line; we definitely wanted to establish our view that the way the MRS was being handled under the National Environmental Policy Act was not proper and that alternatives to the MRS were not being considered.⁷⁶

That is, the state was using the correspondence for more than simply information gathering; as this candid state official admitted, "DOE was probably pretty perceptive about what we were doing [in building an administrative record], and it took a pretty long time to get back responses to those letters."

Concerned that the state would not have sufficient time to review and respond to the MRS proposal to Congress, which DOE continued to insist would be delivered in January, the state tried to get OCFWM to guarantee that no package would be sent to the Hill until 90 days after the state had received its copy.⁷⁷ The DOE demurred, formally responding that the final MRS proposal would be sent to Congress in mid-January, but that the state would be provided a copy of the draft proposal when it was ready. When the DOE failed to deliver to the state its promised MRS proposal to Congress until Christmas Eve, many in the state felt their suspicions of DOE's bad faith were finally and fully confirmed:

We actually got the proposal on Christmas Eve. We were told that we had until January 15 to evaluate that so that gave us six weeks during the holiday season to evaluate a massive stack of documents. There was no opportunity to involve the public and there were some bits of information that were brand new to us. We were effectively denied any kind of meaningful review other than the staff just working intensively on it.⁷⁸

The state resented DOE's "rush to Congress." Once it was clear that the DOE was resolved to proceed with its MRS proposal regardless of what Tennessee did, then deep resentment set in among many who had labored for months on the evaluation. Interviews with state officials involved at all levels of the evaluation make clear that they did not wish simply to file a dissenting report that would accompany the OCFWM proposal to the Congress. The SGCC aspired to full decision making partnership in developing DOE's final MRS choice. Resentment took root when it became apparent that the DOE was not

about to reconsider its choice, although it was willing to entertain the state's suggestions for modifications. At the highest levels, OCRWM was successful in winning the personal respect of Tennessee officials. As Commissioner Word noted, "I never questioned the motives or the integrity of Ben Rusche or Roger Hilley." OCRWM's leadership established that it respected Tennessee's right to independent judgment on the MRS; it just was not about to be bound in any way by it.

In the end the state's frustration with the DOE comes down to the fashion in which DOE was perceived to have shared, or to have failed to share, in timely fashion the information needed for effective state review of the MRS project. As the Director of the SGOC staff characterized DOE-state relations:

As far as personal communications with DOE officials went, they were helpful enough in coming down here and meeting with us face-to-face, and answering our questions. But, they were always very reserved when something had not been settled yet. But once something had been produced in a report or document, they'd come down and explain it to us. But they would not tell us much about what was being developed or about what had not been finalized.⁷⁹

From the state's perspective the DOE throughout the MRS evaluation period engaged in classic "decide, announce, and defend" behavior. To the state this was not consultation, and sometimes became downright insulting.

DOE Perspectives on the State's Performance. Officials in DOE's Office of Civilian Waste Management inevitably formed their own perspective on the state of Tennessee's performance in the MRS case. Interviews with key OCRWM actors revealed significant views on several aspects of the state's performance during their interaction on the MRS, but the federal officials were considerably more circumspect than their subnational counterparts in characterizing the motives of those with whom they dealt.⁸⁰ First, the federal officials thought that the state expected far too much in the way of

formal consultation at this stage of the facility siting process. DOE felt that binding negotiations and written agreements, as well as environmental assessments based on new data, were required only after the Congress authorized the MRS—not before as the state insisted. From DOE's standpoint, its duty was to make the MRS recommendation based on the best available, existing, information. Thus, the federal officials felt that, for this preliminary stage of the process, they were extremely open and forthcoming. As one OCRWM official in Washington put it:

Our view was, and the federal courts subsequently agreed with us, that formal consultation and cooperation was required by NWPA after the MRS proposal was approved by the Congress. But, we went a long way with Tennessee. We gave the \$1.4 million so they could conduct their own evaluation. We acted with them, gave them the opportunity to respond [to our draft proposals], and they actually did respond. So, in that sense there was effective communication with the state of Tennessee all along.⁸¹

Moreover, DOE officials offer as evidence of their good faith the fact that they provided the state with funds even though, unlike its requirement for those states who were candidates for the permanent repository, the NWPA does not require that a candidate MRS host state be provided federal funds for its evaluation of the project.⁸²

While many in Tennessee complained about not getting the documentation needed to fully assess the MRS proposal, those in DOE point to the mountain of documentation provided, and hundreds of staff hours spent interacting with the state:

In addition to the proposal itself which we provided, Tennessee was given the Environmental Assessment which looked at the environmental implications of putting it [the MRS] in any of the three sites, as well as at the needs and feasibility of having the MRS as part of the system. When these documents were being written we shared them as drafts with the state of Tennessee; so they had the opportunity to comment on these as they were being prepared.⁸³

Moreover, despite the complaints of state officials regarding the inadequacy of the DOE justification documentation, federal officials point out that the Environmental Assessment, and other reports regarding the MRS were in fact sufficient to meet all NWPA requirements:

We were required by the Act to submit the proposal to the EPA and NRC and we did that. We provided Tennessee copies with the opportunity to comment on this material and we forwarded their comments to the EPA and NRC, along with the governor's comments. We then shared the NRC and EPA comments with the state. The NRC said it should be licensed, and the EPA said that there would be no environmental harm in putting the in the site. So, all the government agencies involved in the review functioned together very well.⁸⁴

Thus, from DOE's perspective, its interaction with the state of Tennessee was exemplary. As the then Director of OCRWM views the process: "We at DOE hold up Tennessee as an example of how to work together with the state."⁸⁵ And, as Rusche later saw it, "We made more money available to Tennessee, in a short time, [for their evaluation] than anybody else. And, they used it more effectively and did a better job than I think anybody ever dreamed of."⁸⁶

A major sticking point for many of those evaluating the MRS plan for the state was what they considered a fatally flawed, utterly political, site selection process. But, DOE contended that the state expected too much in the way of site selection. From the federal standpoint, the MRS could be sited within a wide range of locations; all that was required by the Act was that OCRWM designate a "satisfactory," not a "perfect" site:

The NWPA did not prescribe the highly stylized or formalized selection procedure for the MRS that was required for the permanent repository. A lot of state people questioned why all designated sites were in Tennessee. The answer is that all three were good sites. If you had five good sites and the choice then was between working with one or two states--and there was no real difference between the sites--why wrestle with two states? From a sociopolitical standpoint, it focuses the attention and presents the opportunity of working out problems [with the state] if you can work them out.⁸⁷

In much the same way that some of the state people involved in reviewing DOE's work on the MRS felt that the federal agency first decided to have an MRS and then developed the technical reports to justify it, staffers in OCRWM considered much of the state's work as preordained:

Many of the people in Tennessee thought they had to oppose the MRS. So they had to figure out ways to oppose it. They could not show it was unsafe, so they eventually had to show that it was unnecessary. So, that's the tack they took.⁸⁸

The state's determination to focus so heavily upon the need for the MRS surprised OCRWM to a certain extent; it struck some in the DOE as misguided, if not at least a little self-serving. As one DOE staffer who was heavily involved with the state throughout the enterprise later put it:

I guess that what surprised me the most about what the state did was when they spent a vast majority of their time in the analysis on whether there was a need for the MRS facility. I don't want to question their motives, but it seems to me that need is for the Congress and the DOE to judge. . . . It was not the state's role to determine whether or not the MRS is needed. . . . That decision is for Congress. The MRS is something that is of national importance and national benefit. It is not something that is just for Tennessee. If we were to let a state make these kind of need judgments, given the controversial nature of these kind of facilities, it would be extremely difficult for them to be objective. It would become almost impossible to site anything then.⁸⁹

The most of the state officials interviewed, made it clear that going into the MRS project they expected, or at least hoped, to significantly affect DOE's plans for the MRS—perhaps even to persuade the federal agency to adopt a non-MRS approach. To them cooperation and consultation meant direct state influence in whether or not to go to the Congress with the proposal at all. Failing that—they hoped to significantly affect what the DOE ultimately went to the Congress with in the way of an MRS proposal. This was, of course, not what happened and led to harsh state judgments regarding DOE's performance. But, DOE's perspective on the entire federal-state interaction process on the MRS was very different. DOE officials felt that the appropriate forum for the

popular will, as applied to the balance of national and state interests, was the Congress of the United States; it was not really appropriate in this view for the DOE to bargain away its best professional judgment regarding the MRS simply because Tennessee officials claimed, with some acknowledged justification, that they represented the citizens of their state. Therefore, the DOE went into the intergovernmental interaction willing to listen to the state's views, but firm in its determination to proceed with its project. As the DOE manager ultimately responsible for implementing the NWPA, Rusche held to the strong view that:

We in the DOE were supposed to be open, forthcoming, and cooperative with the state of Tennessee. But we were also charged to do a job. The only forum with the wherewithal to address such issues [as need for the MRS] is the Congress. And that is where the matter is now.⁹⁰

Rusche and other high level OCRM officials understood the delicate, politically volatile position in which the state officials, especially the governor, found themselves on the MRS. Thus, he was not surprised that "politics would ultimately settle it." As Commissioner Word of Tennessee remembered DOE's attitude, "They did everything they could to win Alexander over to their view." But for Rusche, OCRM did what it did on the MRS because of "our charge under the law to do what we thought was right and proper." As Director of OCRM his only regret was that he was ultimately unable to get Governor Alexander to see it that way.⁹¹

The Federal/State Interaction in Perspective. The DOE and the state of Tennessee had very discrepant perspectives on one another's performance as actors in the intergovernmental evaluation of the MRS proposal. For the most part, those taking part on behalf of the states faulted DOE's performance, even to the point of questioning its motives and good faith. DOE officials, however, tended to see the performance of their state counterparts in a

different, more positive overall, light. The key to understanding this discrepancy is in recognizing that the DOE and the state began with fundamentally different conceptions of what the state's evaluation was supposed to accomplish. Taking both at face value led us to conclude that: For DOE the nine month exercise was a federally funded opportunity for the Tennessee to familiarize itself with a proposal that had already been settled as in the national interest. Tennessee was being extended the opportunity to form its own view, and it was expected make its case for mitigation and compensation of impacts, and to express its view to the DOE. The DOE was pleased to take the state's views under advisement. Thus, DOE officials saw as significant evidence of openness, and good faith, their willingness to add provisions to the congressional proposal to alleviate state and local concerns; thus, they point to such modifications in their final proposal as restrictions on storage capacity and licensing schedules, in lieu-of-taxes payments specifications, and the creation of a state-local steering committee.⁹² But, the DOE had decided by April of 1985 that it was going to the Congress with an MRS proposal and it was not about to change its mind about that. If Tennessee had reservations or objections, fine--DOE's attitude was, "we'll see you on the Hill."

Tennessee, on the other hand, saw the MRS evaluation as an opportunity to become a full partner in NWPA implementation--to help the federal government to find a better way; to use state-generated science and technology expertise to persuade the DOE to rethink, and ultimately modify a course of action the state ultimately judged as serving neither the national or state interest. That kind of partnership was not in the cards.

In the end, then, Tennessee sought to build an administrative record that would facilitate its side of the MRS argument in litigation, as well as to raise equity issues and need questions that would enhance its position later in the Congress. Trust and openness between DOE and Tennessee deteriorated badly over the haul of the evaluation process. By December 1985 they were no longer speaking to one another and things were largely in the hands of the lawyers. Perhaps this was inevitable. For, given their different perspectives on the purpose of the state review, and given the differences between national and state interests that are bound to shape intergovernmental relations in the RWM area, DOE and Tennessee were on a course in which their initially parallel lines eventually had to intersect for collision. After all, the DOE had decided to go to the national legislature to obtain what many regard as the ultimate locally undesired land use (LULU)—a high level radioactive waste treatment and storage facility.

Citizen Participation in the MRS Review Process

In the subnational review of DOE's MRS proposal a variety of approaches to public participation were used in the evaluation process. The state and the local communities collected correspondence, held hearings, provided informational materials, and solicited public opinion regarding the MRS. Oak Ridge and Roane County citizens comprehensively reviewed the MRS plan by forming a citizens task force. Hartsville organized a committee of local officials to evaluate the DOE proposal. Citizens who participated also varied. Some were angry citizens who attended hearings to express their opposition to the MRS facility. Some were environmentalists seeking to represent the public interest. As the former director of one of the state's environmental groups phrased it "there's a lot of weight put on what you say

because you're one of the three or four people in the whole state who are employed solely for the purpose of representing the public view on environmental policy."⁹³ Others were the select public who became "complete activists" and participated in every aspect of the decision making process in their community. The overwhelming majority of Tennesseans, however, were inactive. Most citizens expressed little interest in the location of the MRS, as its construction would have minimal effect on them. A state-wide public opinion survey in February 1986 showed that a majority of Tennesseans opposed the MRS (58%), but a substantial minority (42%) approved it.⁹⁴ When respondents were divided by grand division of the state (East; Middle; West) it is interesting to note that the largest proportion of citizens disapproving the MRS (68%) were located in Middle Tennessee (which includes Nashville), while considerably smaller percentages were opposed in East Tennessee (52%)-- where the MRS was to be located--and West Tennessee (55%)--the area most distant from the facility. That is, opposition tended to increase with distance from the site of the facility.

Citizen Participation and the State Review. The Safe Growth Cabinet Council responded to Governor Alexander's request to include citizens in the state's evaluation process by conducting an extensive public outreach and participation program. The SGCC shared the chief executive's belief that Tennesseans could form an educated opinion on the acceptability of a nuclear waste storage facility only if there were open access to information, both of the project and the state's review of it. Alexander and his Safe Growth Cabinet "were firmly committed to a policy that the citizens of the state should be partners in the state's ultimate decision."⁹⁵ The state, in effect, opened the decision making process to incorporate the views of its citizens.

The state's plan to involve the public became operational in a three-step process. First, materials were provided in public reading rooms that were established in Oak Ridge, Hartsville, and Nashville. Copies of DOE documents were supplemented by reports subsequently developed by the state, and were available for public review. Second, the SGCC measured public opinion by compiling statistics on the positions of citizens who wrote letters, presented oral testimony at hearings, and completed questionnaires generated by its staff. Finally, the SGCC sponsored a series of public hearings held in each of the grand divisions of the state, as well as near the locations of the potential MRS sites.

In order to consult the public and solicit its views, the Safe Growth staff requested the temporary assignment of an additional professional staff person to coordinate the public outreach program. The coordinator was responsible for organizing public meetings and analyzing statewide citizen responses to the MRS proposal. A toll-free MRS "hotline" was installed to provide a way for the state to gauge public opinion. Data were also gathered from correspondence received by the executive branch and petitions. "All comments and opinions received before December 31, 1985 were recorded, tabulated and included in the public response report to the Governor and legislative study committee."⁹⁶ A total of 756 Tennesseans formally expressed their opinions to the state regarding the MRS. Of these, "677 were opposed to an MRS in Tennessee, 38 individuals supported the DOE proposal, and 41 were either neutral or asked questions."⁹⁷ The reasons for support or opposition of the MRS were disclosed, and classified according to geographic region. Transportation safety and transportation risks were cited most frequently by the public as arguments for or against MRS construction.

The public hearings were an issue of some contention among those interacting in the outreach program. While some voiced that the state should immediately proceed with the hearings, the SGCC staff felt that "we actually need to organize this thing so that SGCC members are there on the podium, they're conducting the meeting, and we have experts if we need to, making presentations to the public. But when the public gets up to give their views on MRS, they're talking to real members of the Safe Growth Cabinet Council."⁹⁸

Pursuant to Governor Alexander's instructions that the state gather data and prepare briefings for him on what the MRS meant to citizens, the SGCC agreed to actively participate in the hearings. Although the planning took a bit longer, commissioners and their staffs travelled across Tennessee to ensure the public of the Council's personal involvement in the evaluation process. The SGCC held two rounds of formal hearings; the first were conducted early on to explain the state's approach in evaluating the MRS proposal and to ask for comments on the review process. The second series of meetings, again held in major metropolitan areas across the state, provided a forum for the dissemination of information gathered by the departments and contractors. In all, some nineteen SGCC meetings were held at which the public could offer comment.⁹⁹

The Safe Growth MRS team was not alone in the organization of public hearings at the state level. As mentioned previously, Tennessee's legislature held a series of public meetings that were totally independent of the executive branch, although representatives from the Joint MRS committee attended some of the state hearings. The legislative hearing schedule was basically driven by the district locations of the joint committee members. The Tennessee Congressional delegation tracked the MRS issue closely, some

attended public hearings, and one U.S. Representative conducted a meeting in Nashville at which citizens had a chance to express their opinions.

Tennessee officials then, elected and non-elected, relied quite heavily on hearings to provide a means of encouraging citizen involvement in the MRS evaluation. Correspondence and the measurement of public opinion rounded out the state efforts to assess public views. Yet, since the proposed MRS facility was to be sited at one of three locations in two communities, it is important to observe how citizen participation was manifested at the local level.

Citizen Participation and the Local Reviews—Oak Ridge. To evaluate the impact of the MRS proposal on their local community, Oak Ridge created the Clinch River MRS Task Force (CRMRF) consisting of thirty-two members including local government officials and private citizens. The idea was crafted by the assistant city manager of Oak Ridge, who recommended that staff support be provided by the city. An expert in mitigation who worked with Hartsville at the time of the TVA nuclear power plant siting, and scholars from the Oak Ridge Associated Universities served as consultants. A regional review group was established so that cities and counties along proposed transportation routes could participate in the evaluation process.

The appointment of members in late July 1985 by the mayor of Oak Ridge and the Roane County executive was the result of a structured selection process. Interested persons submitted resumes to the city and county officials. Some were chosen because of their technical backgrounds, while others were lay citizens who expressed a desire to participate; all were volunteers. The roster included engineers, physicists, a geologist, housewives, a statistician, an economist, real estate developers, a college

administrator, the county's civil defense manager and road supervisor, a state highway engineer, the president of the League of Women Voters, and a nutritionist.¹⁰⁰ Membership was divided equally among residents of Oak Ridge and Roane County. As one staff advisor remarked about the representation of the county: "the people in Roane County could trust the final assessment because they were involved and it wasn't just the experts over there in Oak Ridge saying 'yes, this is a good thing that ought to be.'"¹⁰¹

The Task Force was organized into an Executive Committee, whose purpose was to coordinate subcommittee activity, and three Study Groups focusing on environmental, socioeconomic, and transportation issues. The local governments had three citizen representatives apiece on each of the study groups, while two positions on each subcommittee were filled by elected officials, one an Oak Ridge City Councilperson and the other a Roane County Commissioner. The chairs of each subcommittee were elected by their group's members. Figure 2 illustrates the Task Force's composition.

FIGURE 2 ABOUT HERE

The primary objective of the CRTF was to "determine whether the proposed Monitored Retrievable Storage facility should be accepted by the local governments, and if so, under what conditions."¹⁰² Based on "the belief . . . that these issues are to be resolved by Congress, not by the local communities," the CRTF specifically refused to consider the question of the need for the MRS and was not concerned with the process by which DOE had selected its candidate sites;¹⁰³ Task Force members were adamant in stressing this point. As one executive committee member stated: "We did not then nor have we ever gone on record as saying the MRS was or was not needed. That's really the decision that Congress has to make, and we haven't been involved in

that."¹⁰⁴ Another emphasized the national dimension of the nuclear waste problem:

I believe the state of Tennessee has been somewhat distracted by dealing with that [need] question. That is a national policy question that needs to be solved the way national policy should be solved, by the Congress, by the representative Congress [emphasis added] . . . you can almost categorize the Nuclear Waste Policy Act as a welfare program . . . people in this country have gotten a benefit from nuclear energy . . . that's not a divisible benefit . . . therefore it is a welfare program to dispose of the waste from that particular program . . . that's a national policy to be decided. It's not appropriate for the city of Oak Ridge to decide that.¹⁰⁵

Yet another member added that:

We might be listened to on site specific things . . . we are due what we are asking for, that has got credibility. Whereas if we had come out with some high level pronouncements on need it wouldn't have been accepted; we don't know anymore than anybody else.¹⁰⁶

Since the DOE made it clear that it intended to go to Congress with a proposal early the next year, the CRIF set a deadline of three months to compile its report, and decided to limit its study to local impacts of constructing the MRS facility. The attitude was that if the local governments were going to have any influence on the proposal at all, it would be more effective to detail their concerns on the front end, rather than to wait until the DOE submitted its plan to Congress the following January. As one CRIF member commented, "let's do whatever we're going to do quick, to try to see if we can have the impact before it goes to Congress."¹⁰⁷ With the three-month clock running, the Socioeconomic Study Group set out to "identify liabilities, then to quantify them, then attach mitigations to each one."¹⁰⁸ This subcommittee concentrated on examining the probable impacts of the MRS on the Oak Ridge and Roane County economies. The other study groups looked at health and safety concerns, and transportation impacts on the local communities.

In conducting its evaluation, the CRTF held monthly work sessions and the Study Groups met weekly. All meetings and special events were open to the public. CRTF members visited a variety of federal and private facilities dealing in radioactive waste management. The trips included visits to the low-level radioactive waste facility in Barnwell, South Carolina, the DOE's Idaho National Engineering Laboratory, and DOE's Nevada Test Site. Visiting the installations played a significant role in either changing or confirming the opinions of the committee members concerning the safe operation of waste facilities; as a member of the environmental group stated, "We asked a lot of questions; in fact, we asked tougher questions than the opposition had ever thought of."¹⁰⁹ As Word and Neff view its work, "The Task Force approach was to examine the [MRS] proposal to determine if it could be operated safely, and if so, to set forth conditions under which the MRS would be acceptable. The Task Force strategy was to influence the final DOE proposal as it was being drafted."¹¹⁰

One of the most interesting aspects of the CRTF is the relation it had with representatives of environmental groups, as well as the animosity described, by members, between the anti-MRS and pro-MRS contingents. The Task Force felt that its relationship with area environmental groups should be one of "tell us what the problem is, and let's figure out what the solution is so that we can turn that liability into an asset."¹¹¹ Members felt some frustration that MRS opponents raised the same questions, and made the same speeches time and time again, yet did not appear to be interested in hearing any factual-based answers. Others suggested that many citizens who were in opposition to the facility simply had little, or erroneous information concerning nuclear waste storage. At the first public hearing, a committee

member was surprised at the interaction between members of an environmental coalition and citizen proponents of the MRS; he states that "a couple of the Oak Ridgers, respected people who normally are very careful of what they say essentially got up and scolded them, [the environmentalists] which in my view was a most peculiar social interaction."¹¹² Another observer expressed regret that "passion a lot of times took the place of reason. I saw some of the greatest minds in this town get mad at those people because they had a different opinion."¹¹³

Competition among experts well describes what transpired at public forums held in the Oak Ridge area. The CRTF held an "opposition forum" and invited gubernatorial hopefuls, three of four of whom had already announced their vehement opposition to the facility, but none of whom attended. One member conceded that the candidates may not have wanted to debate the nuclear experts residing in Oak Ridge. The most often talked about incident was the transportation workshop sponsored by the CRTF. Transportation experts were brought in from different parts of the country, all of whom had their expenses paid by outside groups. A consultant, whose expenses were paid by a utilities association, was expected to debate with his frequent opponent, a "well known nuclear critic" with an environmental policy group based in Washington.¹¹⁴ When the latter refused to attend, many speculated it was because a local environmental group refused to pay his expenses; the newspaper account states that "Millar rejected an invitation to today's workshop, saying it was being staged for the benefit of MRS backers."¹¹⁵ Supporters and opponents of the MRS, by structuring arguments based on claims of expertise, may well have confused a lay audience concerning the facts of the MRS proposal.

The Clinch River Task Force in its report found that: (1) spent fuel and other high-level radioactive wastes could be safely transported; (2) either of the proposed Oak Ridge sites could environmentally accommodate the proposed facility; (3) the proposed MRS facility could be safely constructed and operated; and (4) the proposed facility could benefit the economies of the local communities, the region, and state.¹¹⁶ But, the CRTF concluded that the MRS would not be acceptable unless DOE addressed its "critical concerns" and mitigated some anticipated impacts. Toward that end the conditions for local acceptance of the MRS included: (1) the establishment of a citizen review board to monitor MRS construction and operation so that the "diligent adherence to rules, regulations, and safety procedures" could be assured; (2) the inclusion of specific limits on the amount of spent fuel to be received by the MRS before an NRC construction license is granted for the permanent repository; (3) provision for annual impact assistance payments, equal to taxes paid on a \$1 billion facility, to be provided to the state, Roane County, and the City of Oak Ridge from the date of congressional authorization of the MRS to facility decommissioning; (4) the relocation to DOE's Oak Ridge Operations office of the management of MRS design, construction, and operation, as well as the management of transportation for the entire civilian radioactive waste program; (5) to overcome widespread perception of the MRS as a "nuclear waste dump," DOE should finance a "significant preoperational public education program," and later help support museum exhibits, about the facility and nuclear power; (6) the establishment of a schedule for bringing all DOE Oak Ridge Operations facilities into compliance with state and federal environmental regulations, as well as implementation of clean-up operations for past DOE pollution—prior to commencement of MRS operations.¹¹⁷ Thus,

while the CRTF clearly indicated to DOE that it could be induced to accept the MRS, it nevertheless required additional assurances to accentuate the benefits, and mitigate the costs, of the waste facility. The CRTF Report was unanimously adopted by the Roane County Commission and the Oak Ridge City Council. A telephone survey of Oak Ridge households taken after the City Council's approval of the report found that more than two-thirds of respondents favored the construction and operation of the MRS in the area.¹¹⁸

Citizen Participation and the Local Review—Hartsville. Soon after a representative from Tennessee's Department of Health and Environment contacted the county executive in Hartsville to discuss the DOE's MRS proposal, local government officials from the primary impact area decided to charter an organization called the Five-County Review, Evaluation, Analysis and Liaison (R.E.A.L.) Committee. The R.E.A.L. Committee was composed of the county executives of Macon, Smith, Sumner, Trousdale, and Wilson counties in Tennessee, the mayors of the five county seats, and the mayor of the City of Hendersonville, and was chartered for such purposes as: (1) providing a forum for communication between the five county governments; (2) assisting government entities in providing information useful in making siting decisions for projects in the region; and (3) making recommendations to the appropriate governments and assisting in the mitigation or reduction of adverse effects associated with proposed facilities.¹¹⁹

The R.E.A.L. Committee differed from the Clinch River Task Force in several ways. Unlike the Oak Ridge evaluation team, the Hartsville group consisted entirely of public officials. No lay citizens were afforded membership status. Second, while the R.E.A.L. group was founded at the time of the state's MRS review, it is clear that the committee met with an agenda

that included, not only the MRS, but other items as well. According to one R.E.A.L. Committee member, the most detailed and far-ranging discussion pertaining to the MRS was held at the group's first meeting; at subsequent monthly gatherings, the MRS was just one item out of several on the Committee's agenda.¹²⁰ The R.E.A.L. Committee "entered into a contractual arrangement" with the Tennessee Department of Health and Environment to perform a site specific study of the proposed MRS.¹²¹ Oak Ridge, on the other hand, assembled its task force for the sole purpose of evaluating the DOE's storage facility. Finally, the Clinch River Task Force, even though some of its members were not proponents of the MRS at the outset, agreed that the group would negotiate a final consensual agreement. The CRTF members were willing to study the DOE's proposal rather than to reject it outright, whereas there was consensus among the R.E.A.L. members from the start that the MRS was undesirable and completely unacceptable. In the introduction to the R.E.A.L. report, this sentiment is revealed:

It was the general opinion of the R.E.A.L. Directors that they did not want the MRS facility located at the Hartsville site and some reluctance was expressed about entering into the contract because it might give an indication of support for such [acceptance of the facility].¹²²

The hesitation detected in the tone of the R.E.A.L. report is quite understandable. The cancellation of another major federal installation in mid-construction, TVA's Hartsville Nuclear Power Plant, led to major economic repercussions for the region. With numerous federal facilities stimulating the Oak Ridge economy, the elimination of funding for the Clinch River Breeder Reactor did not as severely affect the local residents. As a consequence, the Hartsville community did not want another federal facility constructed in their region. This opinion was expressed by local citizens frequently, consistently, and forcefully. The national media, in a telephone interview,

asked the Trousdale County Executive if Hartsville would be the site of the nation's temporary waste storage facility; the response was "no way."¹²³

Despite the fact that the Hartsville area had yet to fully recover economically from the defunct nuclear plant, the R.E.A.L. Directors conceded that it "would be more appropriate to work with the State in this effort than ignore the 'problem' and assume it would never happen."¹²⁴ Local officials were cautious in their relations with the DOE, yet realistic because they knew Congress could override the State's veto and build the MRS wherever it pleased. The possibility, therefore, that the MRS could be constructed at the abandoned TVA site could not be discounted. In fact, as one R.E.A.L. member remarked, "we still live under the fear it [the MRS] could come anyway."¹²⁵ Among the R.E.A.L. Committee's priorities, then, was estimating the adverse effects and transportation problems that would result from the facility for which federal compensation would be required.¹²⁶

The other major efforts of the Committee were directed at determining community attitudes and opinions regarding the MRS, and providing the public with information about the DOE project. A firm was retained to conduct a survey of residents and elected officials, a WATS line was installed for citizen response, and a document center at the Trousdale County Courthouse was established to disseminate information to the interested public. These activities constituted the opportunities for citizens to participate in the R.E.A.L. Committee's MRS evaluation. Although officials attended meetings of civic clubs and some of the public hearings that were held in and near the five-county region, it does not appear that the R.E.A.L. organization sponsored any public hearings.

The Hartsville community rejected the DOE MRS proposal. A survey of public official and citizen opinion regarding the MRS commissioned by the R.E.A.L. Committee in October 1985, found that 100% of the officials and 90% of the citizens disapproved of locating the facility near Hartsville.¹²⁷ Formal resolutions unanimously rejecting the DOE proposal were adopted by the County Commissions for all five counties in the affected area.¹²⁸ In its position statement, the R.E.A.L. Committee argued that the costs of the MRS greatly outweighed any benefits that might be realized, such that:

The negative impacts on the environment, disruption of the community, potential negative economic impacts, negative public opinion, and transportation problems associated with the proposed facility cannot be adequately mitigated by DOE.¹²⁹

Finally, the members of the R.E.A.L. Group urged the Department of Health and Environment to recommend to the State and Federal governments that an MRS facility not be constructed at the TVA Hartsville site.¹³⁰

Thus, at the end of the review process both communities—using significantly different participation strategies—had rejected the DOE proposal. Hartsville's followed the more traditional approach to citizen participation and summarily dismissed the facility. Oak Ridge, using a broader conception of participation, in spurning the facility, specified a variety of innovative conditions under which the MRS facility might be made acceptable to the community.

Citizen Participation in Perspective. Citizen involvement was an important component of the state and local MRS evaluation efforts because public officials felt that the state's decision could be legitimate only if the public participated. By sharing information with Tennesseans and listening to their concerns, it was thought by the reviewers that a better decision could be made. The state established a public education and outreach

program, and in accordance with the state's objective to conduct community impact reviews, the affected local governments organized committees to conduct reviews of the DOE's MRS proposal.

It was not easy to predict how Tennesseans would react to the DOE's plan for the waste facility, especially those who resided near the areas designated as possible sites. It has been noted that "one of the most difficult aspects in evaluating the potential community response to nuclear waste repository siting lies in the fact that no repository has ever been constructed and thus there is simply no historical base from which to judge the potential response to such a facility."¹³¹ Citizen participation, therefore, took different forms. The surveying of public opinion, analysis of correspondence to public officials, and disseminating information in public hearings served as examples of traditional forms of participation. The creation of a citizen task force by the Oak Ridge community exemplifies a more innovative approach to citizen participation by encouraging direct public involvement in the decision making process. The R.E.A.L. Committee serves as an example of indirect representation; citizen opinions are presumed to have been reflected through the actions of their elected officials.

Were the efforts to promote citizen participation successful? That depends on how success is defined. If success means giving citizens more opportunities to speak at hearings, respond to surveys, write letters, and make phone calls, then yes; but if success is interpreted to mean active participation in all the decisions relating to the evaluation, then only to an extent. The former merely widens participation, while the latter makes citizen involvement more meaningful.

The state sponsors of the public hearings had mixed feelings about their effectiveness in mobilizing the public to respond. Poor attendance was often noted as source of frustration. Of the first four public hearings, only the Knoxville/Oak Ridge meeting drew a crowd of over one-hundred. One official noted that although the hearings "gave all Tennesseans a chance to buy into the decision making process . . . and that we did all the things we thought we should do and we were legally required to do . . . they were not attended well at all . . . and we should have been more aggressive in the way we invited people to the meetings."¹³² A leader of a major environmental lobby spoke of the state's efforts, acknowledging that officials provided a vehicle for public involvement, but at the same time, she was not surprised by the modest response from the citizenry of Tennessee:

The state now is much better about letting us in on the decision making process; they've got formal processes by which they invite the public to be involved. But in fact, the public is represented by just a few people and we don't have the strength to stir up a public response on the magnitude of the MRS on more than one or two issues a year. I don't know what the secret is where you get more people involved . . . The state's up against that incredible apathy . . . It's not going to do any good for the state to hold thirty more public hearings in a year on a variety of topics if there isn't a new reservoir of people to attend those hearings and do the research and speak intelligently.¹³³

Considering the severe time constraint most of the actors were reasonably satisfied with the hearing portion of the SGCC's public outreach program. It was felt, furthermore, that the negative responses compiled from correspondence, the MRS hot-line, and the State's questionnaire represented concerns of the citizens of Tennessee that the transportation of casks to the MRS site posed a health threat, and that the facility could not be operated safely.

The Clinch River Task Force was, for the most part, confident in its efforts to solicit participation. The group advertised in the paper

requesting comments, and meetings of the entire task force, as well as those of the subcommittees were open to the public. CRTF members were also satisfied with the composition of the evaluating body; at least half of the task force was composed of citizens whose occupations could be described as non-technical, and some members also belonged to environmental groups such as the Sierra Club and Save Our Cumberland Mountains. Thus, the CRTF felt its report was credible and legitimate in that many interests were represented, and the members were able to reach a consensus on the MRS. Members described the conflict associated with competing expertise at some of the hearings, but conceded that the purpose of public forums is to expose and encourage discussion of contrasting viewpoints.

For the R.E.A.L. Committee, participation meant that citizen opinions were to be measured, and that the group's final decision was to reflect public attitudes. Since citizens did not actually serve on the Committee, the R.E.A.L. Group did not define participation in the same way as did its Oak Ridge counterpart. Elected public officials comprised the entire Hartsville task force membership, whereas the CRTF was composed of citizens with a variety of backgrounds, both technical and non-technical, in addition to city and county administrators. Considering the initial feelings of the R.E.A.L. directors regarding the MRS, the fact that the facility was not cited suggests that the minimal participation efforts were successful.

If one looks at the final assessments of the DOE proposal by the state and local communities, it is difficult to measure the exact impact of citizen participation. On the one hand, the State made an effort to solicit public opinion, yet the governor said at the time of DOE's initial announcement that he would accept the facility if it were in the nation's best interest.¹³⁴ If

public opinion were really a key factor in the state's decision, it is interesting to note that a healthy majority of the Oak Ridgers welcomed the facility, provided that the conditions of the Task Force would be met. In fact, the results of a statewide telephone survey conducted one month after Alexander issued his statement indicates that 42% of Tennessee residents surveyed approved of constructing the MRS in Oak Ridge. The mainly negative responses compiled by the state did reflect some Tennesseans' attitudes, yet it should be noted that a very small proportion of the population called in, wrote letters, or completed questionnaires. These respondents could hardly be representative of the general public. Regardless, the statement issued by Governor Alexander in January 1986 argued against the MRS, claiming that the facility was not needed and that economic development would be stunted in the region surrounding the DOE's preferred site. In his announcement the governor made no reference to the level and intensity of public opposition to the facility featured so prominently in either the R.E.A.L. Committee report or that of the SGCC.

It is equally burdensome to measure the effects of citizen participation in the different responses of the two cities, Hartsville and Oak Ridge. The anti-MRS and pro-MRS sentiments expressed by the respective areas may be attributed to the unique relationships of each community with the federal government. Because of incredible bitterness regarding the federal government stemming from TVA's cancellation of its planned Hartsville Nuclear Power Plant, the R.E.A.L. Committee from its inception had preconceived notions regarding the facility's acceptability. As a result, the group was essentially engaged in documenting the community's opposition to the MRS facility.¹³⁵ It is unclear whether non-traditional forms of participation in

the Hartsville evaluation process would have altered the outcome; but one could speculate that siting would be extremely doubtful, taking into account the TVA experience.

Oak Ridge expressed a more positive attitude, perhaps because it is a community with extensive experience in dealing with the federal government, or because the city's economy has historically been dependent on aid derived from federal facilities. Perhaps it was civic pride; some residents felt that because of its pioneering efforts in nuclear research, "it is Oak Ridge's destiny and responsibility to show the way in safe and exemplary development of new nuclear projects such as the now-defunct Clinch River Breeder Reactor or waste management processes and techniques such as the MRS."¹³⁶ Citizen participation was significant in the Oak Ridge case because the Task Force's conditional acceptance, in effect, legitimized the decision to site the MRS in Tennessee. The positive local response certainly helped strengthen the DOE's argument in its proposal to Congress. Intensive participation, moreover, affected the Task Force members by "changing the opinions of a significant fraction of Task Force members, developing a sense of pride about their participation and achievements, and achieving consensus not only about safety but also about the conditions of acceptability of the proposed MRS facility."¹³⁷ A better decision may have been the result of citizen participation by encouraging discussion and consensus, and promoting community cooperation; these factors represent ideals of direct democracy.¹³⁸ management of high-level nuclear waste.

Media Coverage of the MRS Process

The National Press Coverage. Insofar as the MRS controversy was reported by the national media, it was usually incorporated into analyses of the DOE's

faltering repository program. Specific references to the MRS in newspapers with large circulations such as The New York Times, The Washington Post, The Christian Science Monitor, The Wall Street Journal, and USA Today were rare, with a few notable exceptions. Accounts of the DOE's April 1985 decision to place the MRS facility in Tennessee, as well as the consequences for Tennessee in terms of Herrington's May 1986 decision to postpone the search for a second repository were detailed by major newspapers. A January 1986 edition of USA Today devoted its editorial page to a debate about the need for an MRS. Guest columnists included the director of OCRM and the editor of the Oak Ridger newspaper, both supporting the facility, and a Vanderbilt University physics professor who provided an opposing view. The newspaper formally endorsed construction of the MRS, outlined the potential benefits, and concluded that "the Energy Department should be allowed to build its temporary storage depot in Oak Ridge."¹³⁹ The New York Times, on the other hand, in an editorial highly critical of the Secretary of Energy and the Office of Civilian Radioactive Waste Management, claimed that after the second repository postponement DOE would be allowed to "renew its push for a temporary above ground storage site in Tennessee."¹⁴⁰

Similarly, journalists whose articles appeared in national news magazines tended to focus on the MRS as merely one component of a problematic nuclear waste management system. In an overview of federal/state relations early in the MRS review process, Science magazine was already faulting DOE's interactions with the state:

The department [of Energy] has gotten off to a clumsy start in its pitch for an MRS, which was unveiled in July. Potential sites were narrowed to three spots in Tennessee . . . without consulting state officials. Not only are the state's key congressional members miffed, but Tennessee has gone to court, charging the department with ignoring the waste act's consultation and concurrence requirements.¹⁴¹

In a feature on radioactive waste disposal sites, U.S. News & World Report denounced the elimination of seven states as possible candidates for the eastern repository, speculating that the MRS could become a permanent waste facility if politicians were to "gang up" on Tennessee.¹⁴²

The State and Local Press Coverage. Communities' reactions to the DOE MRS announcement and the ensuing review process were featured in the state's news media on almost a daily basis. Reporters for the various publications followed the review process by attending the public hearings and briefings; they focused on controversial issues surrounding the MRS proposal, such as environmental concerns, safe transportation of casks, and the technical feasibility of constructing an MRS.

As might be expected, newspapers across Tennessee differed in the extent to which they reported the MRS siting process, and the degree of intensity to which the facility was supported or opposed. Of the newspapers published in three major metropolitan regions of the state--Memphis' Commercial Appeal, Nashville's Banner and Tennessean, and Knoxville's News-Sentinel and Journal--the Nashville papers were most consistent in their opposition toward the MRS facility. Frequent editorials appeared condemning the DOE's proposed waste "dump," and anti-nuclear cartoons depicted trucks transporting nuclear materials as tanks carrying deadly cargo. In response to a proposal to offer states bonuses for accepting nuclear waste facilities, one Nashville editorial suggested that Congress "conduct a sort of reverse auction for the honor of hosting the dump sites."¹⁴³ The inadequacy of the Nuclear Waste Policy Act to require state and regional, as well as local compensation may have contributed to the overall negative tenor of media reports in middle and western regions of the state. Since the majority of Tennesseans would not realize benefits

from an MRS facility in Oak Ridge, the citizens had little incentive to support its construction.

At the other end of the spectrum, the Oak Ridger was relatively positive in its assessment of DOE performance, and more amenable to the construction of the MRS in the community. As its editor stated in a national column, "last year we think we made history again, saying 'YIMBY' (yes, in my backyard)".¹⁴⁴ Being a "nuclear" community, the Oak Ridge press was particularly vocal in its opposition to those Tennessee gubernatorial candidates whose campaigns engendered anti-nuclear sentiment, and expressed criticism of media members of the "anti-nuclear persuasion." The tone of editorials published in the Oak Ridger was generally favorable, concurring with the Clinch River Task Force that Congress should decide the fate of the MRS, that congressional committees be given an accurate account about local support for the MRS, and that it is "contingent on the federal government meeting the task force conditions."¹⁴⁵

Coverage of Related Key Events. Because public perceptions associated with risks are likely to be reflected in, as well as influenced by the media, it is worthwhile to mention events at the national, state, and local levels that may have contributed to an erosion of public confidence in DOE. The agency, though encountering difficulties in its civilian waste management system, also had to confront criticism leveled against its national defense program. In a nationally-televised news documentary, defense facilities at Hanford, Washington, Savannah River, South Carolina, Rocky Flats, Colorado, and Idaho Falls were portrayed as extremely dangerous because of outdated equipment and safety violations. Accusations of mismanagement of these "bomb factories" by former DOE employees did little to reassure the public that the DOE is an agency capable of managing a program in which radioactive wastes

must be safely isolated from the environment for thousands of years. At the state level, the Tennessee Valley Authority was at an impasse with its nuclear power program. Reactors at Browns Ferry and Sequoyah were shutdown indefinitely because of concerns over emergency safety equipment, and construction at two other plants was suspended. Even though the problems emanated from another federal agency, the troubled TVA program provided ammunition for state environmental groups to oppose the MRS. Finally, the disclosure by DOE of mercury dumping and radioactive releases at its Oak Ridge reservation was used by local opponents as a tactic to arouse public suspicion of the MRS program. The combination of these highly publicized events could only contribute to the already enormous credibility problem encountered by the Department of Energy.

DOE's MRS Proposal to Congress

The DOE issued its "draft proposal" for the MRS in December 1985, and its provisions were sufficiently sensitive to those conditions contained in the Clinch River Task Force report to lead the coordinator of group to observe that "my initial reaction is that every important issue we raised has been addressed. This was the real test."¹⁴⁶ At the same time, though, the coordinator expressed the need for "a certain degree of skepticism" regarding the draft's stress on DOE's desire to be a "responsible corporate citizen."¹⁴⁷ The state, however, was unimpressed with the DOE draft and engaged in legal action in the federal courts that postponed the actual submittal of DOE's final proposal until March 1987.

DOE's Final Proposal. In the final MRS proposal DOE asked Congress to approve the construction of an MRS facility, with a storage capacity limit of 15,000 metric tons of uranium (MTU), at the Clinch River site in Oak Ridge.

In reviewing the advantages of an integrated MRS system for the national high-level radioactive waste management system envisioned in the NWPA, DOE took care to emphasize its potential for enhancing the public acceptability of the deep repository program as well:

One of the potential benefits of developing the integral MRS facility is the early opportunity to demonstrate that a major Federal waste-management facility developed under the Act can be not only safe and environmentally sound but also a responsible "corporate citizen." Such an early demonstration would not only benefit the State and the local community hosting the MRS facility but could also help assure potential repository host States that the DOE's actions in response to their concerns will be similarly addressed.¹⁴⁸ (emphasis added)

DOE emphasized that it had sought to accommodate state and local concerns regarding the facility:

The issues, potential impacts, and mitigating measures identified by the Task Force . . . and its special insights into local conditions and attitudes—and by the Safe Growth Cabinet Council were important in the formulation of . . . this proposal.¹⁴⁹

Thus, a variety of "institutional measures," to be funded out of the Nuclear Waste Fund and shaped by the federal, state, and local interaction during the MRS review process, were recommended; but the DOE insisted that such activities were "not intended to establish precedents for other DOE activities," nor was their proposal for the MRS to be "construed as an endorsement of their application to other DOE activities."¹⁵⁰ Two measures were explicitly recommended to provide a mechanism for state and local involvement in the implementation of the MRS project: (1) An MRS Steering Committee that included subnational representatives; and (2) development of a comprehensive "consultation-and-cooperation" (C&C) agreement between the DOE and the State of Tennessee.

The MRS Steering Committee (MSC). The MSC was to be a mechanism for state and local involvement in the design, construction, operation, and

decommissioning of the proposed facility. The MSC would "provide guidance, conduct performance evaluations, and recommend corrective actions." The manager of the DOE MRS project manager was to be assigned the task of responding to the recommendations of the MSC. If the MSC disagreed with the project manager's response, the director of the Oak Ridge Operations Office, and if necessary, the director of OCFWM, were supposed to "ensure" that the disagreement was "fully and openly aired and resolved fairly, equitably, and promptly."¹⁵¹ The organization of the proposed MSC is provided in Figure 3.

Figure 3 About Here

DOE proposed a subcommittee structure to address the range of likely concerns that would require the attention of the MSC, but left the actual formation and functions of the MSC to the C&C agreement to be negotiated after congressional authorization of the MRS.

The C&C Agreement. DOE proposed to enter into a binding written C&C agreement with the state of Tennessee within 60 days of congressional approval of the MRS proposal. This would be an "umbrella contract" between DOE and the state covering "all items considered important by the DOE, the State, and the local community."¹⁵² As envisioned by DOE the C&C agreement would include procedures by which the MSC would function to determine the possible impacts of the facility and make recommendations regarding them, provide DOE with state and local recommendations, oversee the administration of financial assistance, transportation operations, and other elements of the MRS plan, as well as to accomplish "other goals" established by the federal, state, and local governments. The C&C would also set up processes whereby the DOE would: (1) assist subnational governments in resolving "offsite concerns" such as road upgrading, emergency preparedness, and monitoring of the health of local

residents; (2) allow state review and evaluation of the project; (3) notify the state before transporting waste to the facility; (4) allow state or local authorities to conduct "reasonable" independent monitoring and testing at the site; and (5) allow for resolution of disputes, at any stage of the project, "through negotiation, mediation, or other mechanisms." The DOE left it to the local governments and the state to work out between themselves "the nature and extent" of local involvement in the C&C agreement—including the degree to which issues of "direct local concern" would be left to negotiation or agreement "directly between the DOE and units of local government."¹⁵³

Transportation. In its initial response to DOE's MRS plan, the state of Tennessee and the CRTF raised a number of transportation issues that the proposal to Congress sought explicitly to address. Thus, the DOE proposed to: (1) support the upgrading of the Tennessee transportation infrastructure; (2) notify designated subnational officials in advance of each waste shipment; (3) assist and fund the development of "emergency-response" capabilities and equipment; and (4) encourage and support funding for participation of state authorities in "comprehensive inspections" of spent fuel shipments to and from the facility. Obviously recognizing the critical role that transportation safety plays in public concern and opposition to any repository facility, the DOE reiterated its commitment to "reinforcing the confidence of States, Indian Tribes, and the public in its ability to operate a safe and efficient transportation system in support of the MRS facility."¹⁵⁴

Environmental Clean-up. A major stumbling block to DOE acquisition of local support for its MRS plan was the history of the agency and its contractors as "corporate citizens." DOE responsibility for major environmental hazards in Oak Ridge, as well as its failure to come into

compliance with applicable state and federal environmental regulations, deeply concerned local MRS supporters as well as opponents. The CRTF requested that the DOE establish a schedule for bringing all of its Oak Ridge operations into compliance with environmental regulations—especially residual contamination from previous, as well as on-going, agency activities in the area. In its proposal to Congress the DOE demurred from establishing such a compliance schedule while observing that:

Because of the magnitude of these various [environmental clean-up and protection] efforts, it is not possible to accurately determine when compliance will be attained. The DOE will strive, however, to meet its environmental commitments consistent with allotted resources. (emphasis added) ¹⁵⁵

Mitigation of Socioeconomic Impacts. The DOE, recognizing that the mitigation of potential social and economic impacts identified in the state and local MRS evaluations involved measures that went well beyond the "limited requirements" of Section 141(f) of the NWPA, proposed a wide-ranging financial assistance package. Thus, it was proposed that the DOE: (1) would take "appropriate actions to encourage the diversification of the local industrial base;" (2) would—in addition to assistance for mitigating social or economic impacts and payments equivalent to taxes (PET)—fully reimburse Tennessee for "reasonable direct expenses" incurred in association with the MRS; (3) would provide financial assistance programs (to be defined in the C&C agreement and administered by state and local governments) required to plan and implement the mitigation and prevention of MRS facility effects; and (4) would use procurement provisions under existing federal regulations, as well as "other specific measures, to ensure that the State and local governments will not be negatively affected" by the development and operation of the MRS, or by the transportation of fuel waste to and from the site.¹⁵⁶ During the 10-year

preoperational phase of the project, DOE estimated that financial assistance payments on the order of \$10-15 million per year would be required. The DOE PET commitment was for an MRS facility valued at \$1 billion; annual PET payments would be paid annually beginning with the preoperational phase and continuing until decommissioning. In 1985 the assistant manager of Oak Ridge estimated that, based on the current property tax rates, the PET would amount annually to about \$4 million. Of prime concern to the state and the CRTF was the likely impact of the MRS facility on regional economic development efforts. The DOE proposed to provide funds to mitigate such affects with amounts to be settled in the C&C agreement. Moreover, it was proposed that the DOE would use its Museum of Science and Energy in Oak Ridge to provide public information, and enhance the image of the MRS as a "positive contribution" to the region.¹⁵⁷

State and Local Reaction to the DOE MRS Proposal. The Oak Ridge community by-and-large recognized that the DOE had carefully crafted its congressional proposal according to the conditions set down in the CRTF report a year earlier; in so doing, the agency had gone far toward winning local active support. Two major problems, however, potentially weakened local acceptance. First, the proposed MRS Steering Committee was not a local citizen's monitoring committee as envisioned by the CRTF. Of the 9-member committee, only two represented "local" governments—and these might well be elected or appointed public officials rather than "civilians." In its pluralistic approach, in which many affected parties in addition to local citizens (the state, utilities, "other public interests"), the committee became more "representative," but less likely to inspire "local" confidence in the project. Second, although the DOE recommended that the MSC was to have

unprecedented access to information regarding facility operations, it was extended only advisory and recommendation powers; final decision making power continued to reside in the federal agency. Unlike the citizen's monitoring committee proposed by the CRTF, the MSC could not close down facility operations if it became concerned about health and safety. It is unlikely, however, that in and of itself, the more pluralistic, less powerful MSC recommended to Congress by the DOE would have been a barrier to local acceptance.

Far more serious was the "failure" (or inability, or simple choice) of the DOE to make firm commitments to bring its Oak Ridge operations into compliance with environmental regulations, or to provide a schedule for clean-up activities. In conjunction with its checkered past as a "corporate citizen," this "failure" might well have proven fatal to OCRWM's winning local support in the congressional battle. In testifying before the Congress about the MRS proposal, the coordinator of the CRTF was frank, and negative, about local confidence in DOE's promises of good citizenship:

As I represented the Clinch River MRS Task Force and went across the State appearing in hearings, I was repeatedly asked how I or anybody else living in Oak Ridge could possibly subject the State to the kind of environmental insults that DOE was subjecting in return for short-lived economic gains that only we could appreciate.

You may see my judgment of DOE as unduly harsh. Perhaps not, given the kinds of statements [being made by DOE officials affirming their intention to be a good citizen] this morning and in months past. But as a local government administrator, I regret that DOE has not taken the responsibility to establish good working relationships in the communities in which it is located, and with State and local officials.¹⁵⁸

The state of Tennessee rejected outright the DOE MRS proposal; both the governor and state legislature filed notices of disapproval with the Congress. In its "statement of reasons" for disapproval the state argued that: (1) DOE's emphasis on MRS development was contrary to the intent of the NWPA; (2)

the national need for the MRS had not been established; (3) the costs of the MRS "far outweigh" the benefits; (4) when, as proposed, development schedules for the MRS and the permanent repository are linked, many of the putative operational benefits—which according to DOE warrant the high program cost—"disappear;" (5) the "proper planning procedure" had been bypassed in DOE's neglect of non-MRS alternatives; (6) there was no consultation and cooperation with the state prior to DOE's decision to proceed with the MRS in Tennessee, and DOE had "failed to share on a timely basis important information about the proposal;" (7) siting the facility in Tennessee was the product of a "technical and administrative procedure" that was "flawed both in concept and in application;" (8) the state remained concerned about the health and safety of citizens given that some of the "most critical technology" was yet to be proven, and past practices raised questions regarding federal capacity for proper management; (9) the MRS would involve "adverse impacts" far beyond the boundaries of the host city and county—including potential claims from a "catastrophic nuclear disaster, that DOE (or the current Price-Anderson Act) did not provide a sufficiently broad or "firm commitment" to mitigate them.¹⁵⁹ The overall thrust of the state's objections was a clear rejection of DOE's MRS facility justification, site selection process, and mitigation plans. That is, the impasse between Tennessee and DOE reached nearly two years earlier remained: most of what DOE proposed settling in C&C agreement negotiations after Congress approved the project, the state demanded to have established before Congress proceeded.

The Nuclear Waste Policy Amendments Act of 1987

During 1987 the Congress struggled over what was to be done to restore energy, and direction, to what had become a stalled program for implementing

the NWPA of 1982. Much of the environmental community, Representatives and Senators from first-round repository states (outraged by the 1986 decision of the Secretary of Energy to postpone the search for a second repository site in the East) reenforced by an "energized" Tennessee delegation out to derail the MRS, pushed hard for a moratorium on DOE implementation efforts. The fragile consensus that had created the NWPA in 1982 collapsed entirely when the nuclear industry itself, and its primary congressional architects, Representative Udall and Senator Johnston, concluded that amendment was absolutely required. In December the Nuclear Waste Policy Amendments of 1987 (NWPAA) resulted from a frenetic series of end of the session House and Senate negotiations. The Congress "annulled and revoked" the DOE proposal to locate the MRS project at Oak Ridge, Tennessee. The integral MRS concept, largely due to the determination of Senator Johnston, was nonetheless maintained as a potential feature of the national waste program.

To what extent was the prospective MRS program that emerged from the congressional negotiations shaped by the DOE-Tennessee dispute? The answer is to a very large degree. Perhaps the most telling objection to the DOE MRS proposal was Tennessee's challenge to its need. In order to settle this fundamental question, the Congress established an MRS Commission, that extensive study, would report by June 1989 on the need for a MRS facility as a part of the national waste management system, and offer its recommendation to the legislature.¹⁶⁰ The Secretary of DOE was authorized, subject to final congressional approval, to "site, construct, and operate" one MRS facility. The DOE can undertake a national search for potentially suitable candidate sites once the Commission submits its report to the Congress. Recognizing the problems caused when the original Act did not apply the same negotiation and

benefits standards to the MRS as to the repository, Congress made clear that these now applied equally to both; thus financial assistance could be extended to states, tribes, and local governments affected by the MRS in the same way as for the repository. To resolve the dispute over when the DOE could enter into a benefits agreement with states, tribes, and local governments affected by the MRS, the amendments specified that DOE was authorized to enter into a benefits agreement with affected parties as soon as the site selection was made. Moreover, such benefits were to be negotiated between DOE and the governing bodies of tribes, and state governor, in consultation with affected local governments. In apparent recognition of Tennessee's concern over the sufficiency of DOE's socioeconomic mitigation funding package, the amendments provided that, in addition to those benefits negotiated in the "Benefits Agreement," the state in which the MRS was located would receive \$5 million per year prior to the first spent fuel receipt. Upon the first spent fuel receipt at the facility, the state would receive \$10 million, and \$10 million annually thereafter until closure. At least one-third of these funds must go to local governments.

The DOE in its Oak Ridge MRS proposal recognized the deep local concern over, and desire for oversight of, the construction, operation, and decommissioning of the facility; toward that end, an MRS Steering Committee was recommended for the project. In the NWFAA, as part of the benefits agreement to be negotiated among DOE and affected parties, Congress created a Review Panel with essentially the same organization and functions as DOE's proposed MSC.¹⁶¹ While extensive advisory and recommendation duties are prescribed for the Review Panel, as had been the case with the MSC, real power is reserved for the DOE; no local authority to close facility operations is

recognized or extended. Congress thus eschewed the CRTF "citizens" oversight approach in favor of DOE's broader conception of representation of national and state, as well as local interests.

Lessons and Prospects

A number of significant lessons are to be derived from the Tennessee experience with DOE's attempt to site an MRS facility within its borders. To begin with, the DOE is very "generous" with the Nuclear Waste Fund. For the most part the agency has been willing and able to provide ample funds to subnational units to evaluate its proposals. Clearly, DOE is willing to be persuaded to commit large amounts for PET, as well as socioeconomic mitigation purposes as part of the benefits agreements to be negotiated with affected parties. If anything, the NWPA of 1987 "sweetens the pot" even more with its provision for annual lump sum payments above and beyond financial assistance guaranteed under benefits agreements. But, when it comes to funding commitments that cannot be covered by the Nuclear Waste Fund, such as environmental clean-up operations, OCRM is in terrible bind—and opponents are making the most of it! The DOE and its contractors have significant environmental regulation compliance problems—requiring very significant costs far beyond present commitments. The NWPA did nothing to alleviate the problem; thus, OCRM must still carry the onus of being unable to agree to state and local demands regarding environmental clean-up and non-MRS facility problems.

The state and local governments, and associated groups, are not monolithic units with which the DOE can negotiate. The original NWPA envisioned DOE's winning subnational acquiescence in the national waste

management system by going through the states. Local governments were largely excluded—or at least ignored. The MRS and deep repository experience showed the danger in such an approach. While "treating" only with state government assuage the feelings of state-level politicians and officials, experience with NWPA implementation shows that they are not the only subnational force with which DOE must reckon. While the NWFAA more explicitly recognizes local governments, and requires that they be consulted by the state during benefits agreement negotiations, it may well not go far enough. As the Tennessee MRS case indicates, and the experience in repository states is consistent with it, state and local governments simply do not have the same perspectives, interests, and constituencies; effective DOE interactions with one level does not necessarily amount to successful implementation of its program. Future C&C agreements will have to be mindful of this and may well continue to crash upon the rocks of state and local conflicts within affected areas.

DOE's "decide, announce, and defend" approach weakens its friends and strengthens (as well as increases the number of) its enemies. Advance consultation, timely warnings of impending federal decisions and activities, long periods of review, can "win friends and influence people." It is true that opponents are advantaged in such a situation; but given the deep resentment caused by the DAD approach, as practiced by the DOE in the MRS case, it is clearly time for the agency to try something new. The NWFAA requires that DOE provide an affected state with at least six-months notice before it is designated as an MRS site. This period seems certain to be considered "insufficient," even by those in the lucky state who begin with an open-mind about the project; it takes time as well as resources to build

support as well as opposition to an MRS. The DOE would do well to learn from its Tennessee experience and open consultation as early as possible.

Put simply, the DOE is not trusted. The legacy of the AEC, DOE's own troubled history, the poor performance of the agency and its contractors as "corporate citizens," this is baggage that is carried always by the OCRWM into negotiations with subnational officials and citizens. Even in a community such as Oak Ridge, which is filled with a critical mass of technically sophisticated, and energy aware professionals, suspicion of DOE promises runs deep. Vigorous leadership and true commitment at the highest levels of the DOE will have to be deployed in support of the nuclear waste management program; OCRWM cannot handle the job alone. Further, the Congress will have to put pressure on, and provide sufficient resources for, DOE environmental clean-up operations around the nation. Until such time as this happens, OCRWM's word just is not going to be worth much to those who must accept the costs and risks associated with nuclear waste facilities.

The states have developed formidable resources with which to review, evaluate, and if need be (and it now seems as if the need is always there) challenge, the federal government on science and technology issues. Tennessee was advantaged by the existence of the governor's Safe Growth Cabinet Council, but as the Oak Ridge-Roane County experience with the Clinch River Task Force shows, local governments can and will mobilize as well. As one longtime observer of the nuclear waste program has observed: "You'd be surprised how fast, and effectively, state and local governments can mobilize whenever the feds show up with plan to place a nuclear waste facility in the neighborhood." With this in mind, the DOE needs to carefully review both the substance, depth, and the tone of its plans, as these are presented in the states, under

the NWPA and NWPAA. Anything short of excellence in its operations—whether in science and technology, or in public relations matters—reduces confidence in DOE's competence which only serves to embolden opponents and dispirit allies.

The Tennessee MRS case demonstrates that public health and safety concerns take precedence over financial considerations when it comes to enticing states and communities to accept (or at least acquiesce to) a nuclear waste facility. The DOE is not reluctant to promise Nuclear Waste Fund dollars for health and safety matters—but is extremely cautious in empowering local citizens to do anything about them—such as closing down the facility. The Review Board model further dilutes local citizen control. Whether anything less than a powerful citizen's monitoring committee, in addition to the broader group representation model envisioned, will be sufficient to win local acceptance of an MRS remains to be seen.

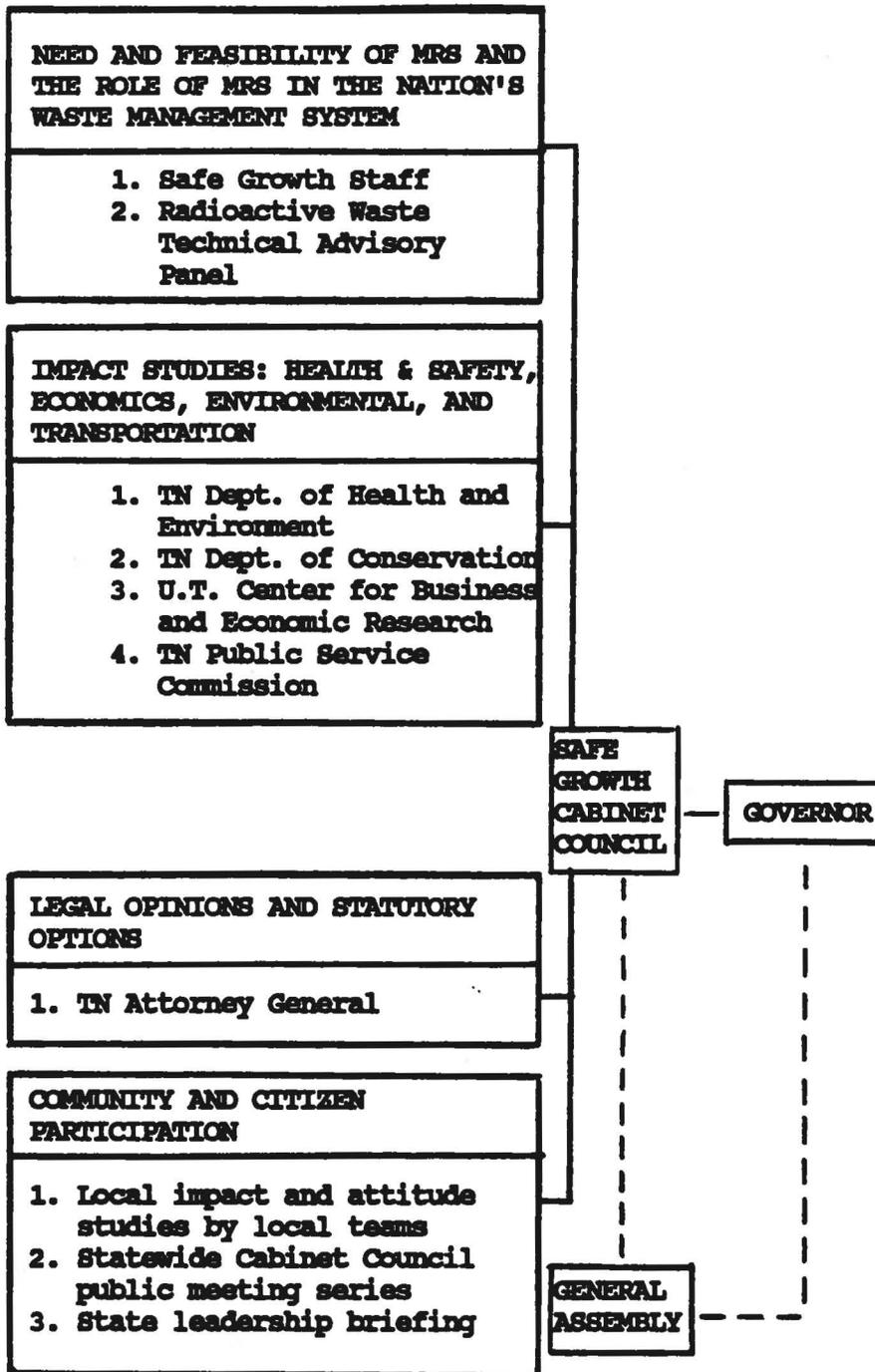


Figure 1 Structure of the State's MRS Evaluation Effort

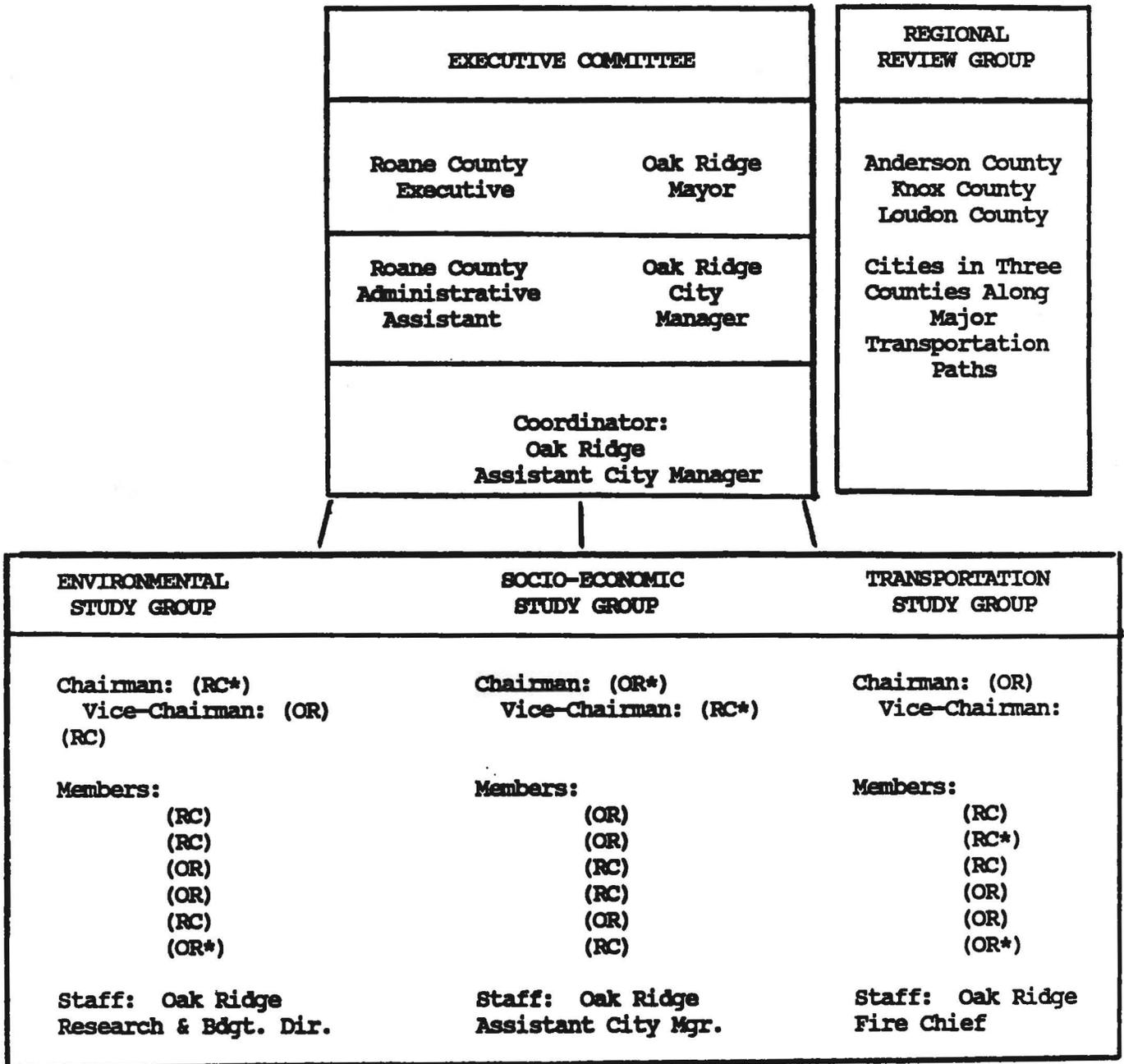


Figure 2 Organization of Clinch River MRS Task Force^a

^aRC = Roane County Member; OR = Oak Ridge Member; * = Elected Legislator

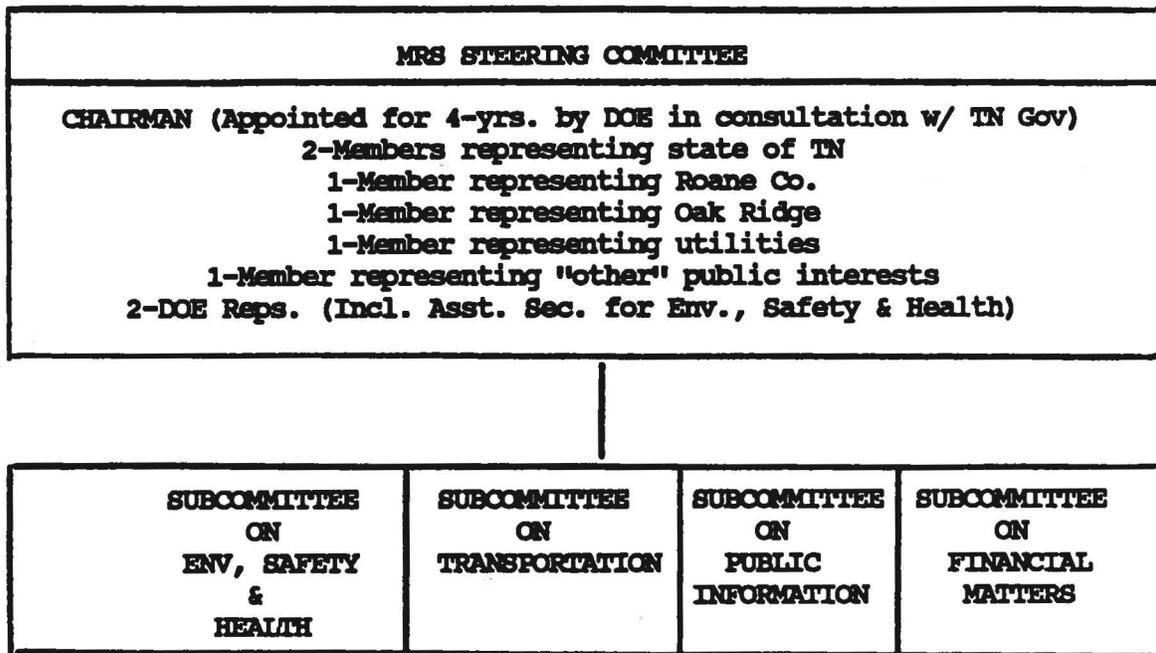


Figure 3 The Organization of the Proposed MSC and Subcommittees

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11. Ibid: 2-3.
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15. Public Law 97-425, 96 stat. 2201, 42 U.S.C. 10101 et seq.
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17. Ibid: 5.

18. Ibid: 8-9. The areas deemed important were: ease of regulatory compliance; existing environmental setting; geotechnical site characteristics; socioeconomic setting and changes which might be induced by MRS development; institutional and administrative structure of the state; local transportation characteristics; access to physical infrastructure; and capital cost of construction. The membership of the MRS Site Screening Task Force included specialists from six DOE contractor organizations: Pacific Northwest Laboratory; Goldner Associates; Ralph Parsons Company; Engineering Sciences; Battelle Project Management Division; and Battelle Human Affairs Research Centers.
19. Ibid: 27.
20. Ibid: 28.
21. Ibid: 1.
22. Ibid: 3.
23. Letter From Peter J. Gross, Manager, Monitored Retrievable Storage Office, Oak Ridge Operations, U.S. Department of Energy, to Wayne K. Scharber, Director of Environment, Tennessee Department of Health and Environment, September 17, 1985.
24. Ibid.
25. Ibid.
26. James E. Word and Ruth H. Neff, "Tennessee's Response to the MRS Proposal," in Roy G. Post, ed. Waste Management '86: Waste Isolation in the U.S. Technical Programs and Public Education, Vol. 2, High-Level Waste, proceedings of the Symposium on Waste Management, Tucson, March 2-6, 1986: 277.
27. Personal interview with Mr. James E. Word, Commissioner of Health and Environment, State of Tennessee, Nashville, Tennessee, November 1986.
28. It included the state commissioners of Health and Environment, Transportation, Economic and Community Development, Conservation, and Agriculture, as well as the Executive Director of the Tennessee Wildlife Resources Agency. The Executive Director was expert in environmental planning and transportation and the Associate Director was a expert in environmental affairs and activism.
29. Personal interview, Nashville, November 1986.
30. It included the state commissioners of Health and Environment, Transportation, Economic and Community Development, Conservation, and Agriculture, as well as the Executive Director of the Tennessee Wildlife Resources Agency. The Executive Director was expert in environmental planning and transportation and the Associate Director was a expert in environmental affairs and activism.

31. Personal interview with Dr. Ruth Neff, Assistant Director, Safe Growth Team, Nashville, November 1986.
32. Tennessee General Assembly, Senate Joint Resolution 183, June 28, 1985.
33. Personal interview with Mr. Nathan Ridley, Counsel to the Joint MRS Study Committee, Nashville, May 1987. This "at a distance," approach in which the legislature virtually surrenders the field to the executive was also taken by the Texas legislature regarding the DOE attempt to designate Deaf Smith County as a candidate for the deep geologic repository. Personal interview with Mr. Christopher Ruykendall, Senior Researcher, Texas Legislative Council, Austin, March 1988.
34. Tennessee General Assembly, Special Joint Committee, Report of the Special Joint Committee to Study the Monitored Retrievable Storage (MRS) Facility Proposal, Nashville, April 1986.
35. Personal interview with official involved in the SGCC evaluation of the MRS, Nashville, 1986.
36. Word interview.
37. Letter from Ms. Mayo Taylor, Executive Director, Tennessee Environmental Council to Charles A. Howell, III, Commissioner of the Department of Health and Environment, May 17, 1985.
38. Two of the three candidates were members of the state Public Service Commission and throughout the review frequently attended and spoke at public hearings around the state. One of these, Commissioner Frank Cochran, made his MRS opposition the cornerstone of his campaign and coined the slogan "don't dump on Tennessee."
39. Tennessee Department of Health and Environment, Safe Growth Cabinet Council, A Proposal to the U.S. Department of Energy for Independent Evaluation of Need, Siting, Logistic, and Design Assumptions Forming the Basis for the Proposal for a Monitored Retrievable Storage Facility (Nashville, Tenn., 1985).
40. Word and Neff: 577.
41. Ibid.: 578.
42. Ibid.
43. Ibid.
44. State of Tennessee, Office of the Attorney General, Report of the Attorney General to the Safe Growth Cabinet Council (Nashville, Tenn., 1985): 1-4.
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46. E. William Colglazier, Evaluation of the Need, Feasibility, and Siting of the MRS in Tennessee: Summary Report, December 1985: Executive Summary.
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48. Tennessee Department of Conservation, MRS Evaluation Team, Report to the Safe Growth Council on MRS, December 1985: Executive Summary.
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51. Center for Business and Economic Research, College of Business Administration, University of Tennessee, An Economic Analysis of a Monitored Storage Site for Tennessee, December 1985.
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55. Neff interview.
56. Personal interview with Dr. E. William Colglazier, Member of the MRS Technical Advisory Panel, Knoxville, September 1987.
57. Colglazier, Evaluation of the Need, Feasibility, and Siting of the MRS in Tennessee: 20.
58. Office of the Governor, Governor's Information Office, "Statement of Lamar Alexander," January 21, 1986.
59. Ibid.
60. Ibid.
61. Edward M. Davis, "The Role of Economic Incentives in Nuclear Waste Facility Siting," in Roy G. Post, ed. Waste Management '86: Waste Isolation in the U.S. Technical Programs and Public Education, Vol 2, proceedings of the Symposium on Waste Management, Tucson, March 2-6, 1986: 37.
62. Personal interview, Nashville, January 1987.
63. Personal interview, Nashville, November 1986.
64. Personal interview, Oak Ridge, June 1987.

65. Personal interview, Nashville, December 1986.
66. Personal interview with Mr. Charles Howell, Commissioner, Department of Conservation, State of Tennessee, Nashville, November 1986.
67. Ibid.
68. Ibid.
69. Personal interview with state official, Nashville, 1986.
70. Word interview.
71. Personal interview with agency staff member involved in MRS evaluation, Nashville, December 1986.
72. Letter from Commissioner James Word to OCRM Director Ben Rusche, July 2, 1985.
73. Personal interview with DOC staff member, Nashville, 1986.
74. Letter from Mr. Ben Rusche to Commissioner Word, August 26, 1985.
75. Personal interview with SGOC staff, Nashville, November 1986.
76. Personal interview, Nashville, December 1986.
77. Letter from Commissioner James Word to Mr. Ben Rusche, August 9, 1985.
78. Personal interview with Mr. Ben Smith, Executive Director, Safe Growth Team, Nashville, January 1987.
79. Ibid.
80. To some degree this more diplomatic approach was probably due, in some degree at least, to the fact that the interviews were conducted while the DOE was in the process of presenting the MRS proposal to the Congress.
81. Personal interview, Washington, D.C., February 1987.
82. 42 USC 10136, Sec. 116(c) (1A) provides that "The Secretary shall make grants to each State notified under subsection (a) for the purpose of participating in activities required by section 116 and 117 or authorized by written agreement entered into pursuant to subsection 117(c). 42 USC 10161, Sec. 141(h) regarding state participation in the MRS proposal does not apply Sec. 116(c) (1A) to the MRS.
83. Personal interview with Mr. Roger Hilley, Assistant Director, Office of Civilian Radioactive Waste Management, Washington, D.C., February 1987.
84. Ibid.

85. Personal interview with Mr. Ben Rusche, former Director, Office of Civilian Radioactive Waste Management, Tucson, March 1987.
86. Ibid.
87. Ibid.
88. Personal interview with senior DOE official, Washington, D.C., January 1987.
89. Personal interview with DOE staff, Washington, D.C., January 1987.
90. Ibid.
91. Ibid.
92. Hilley interview.
93. Personal interview with Ms. Mayo Taylor, former Executive Director, Tennessee Environmental Council, Nashville, January 1987.
94. The survey was administered between February 16 and February 23, 1986, by the authors under contract with the Energy, Environment, and Resources Center of the University of Tennessee. Households were randomly chosen from the universe of all Tennessee residences having listed telephone numbers, with respondents randomly chosen from members of the selected households who were eighteen years or over. The sample size was 588 yielding a margin of error for the results of + or - 4%.
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104. Personal interview with Mr. Roy Pruetz, Mayor of Oak Ridge and Executive Committee Member of the Clinch River Task Force, Oak Ridge, September 1987.
105. Harris interview.
106. Personal interview with Mr. Robert Peelle, Roane County Commissioner and Chair, Environmental Study Group of the Clinch River Task Force, Oak Ridge, September 1987.
107. R. Peelle interview.
108. Personal interview with Mr. Larry Dickens, Former Oak Ridge City Councilman and Chair, Socioeconomic Study Group of the Clinch River Task Force, Oak Ridge, September 1987.
109. R. Peelle interview.
110. Word and Neff: 579.
111. Dickens interview.
112. R. Peelle interview.
113. Dickens interview.
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117. Ibid.: 6-12.
118. Joseph C. King, "MRS and the Local Community: The Oak Ridge Area Response," Forum for Applied Research and Public Policy 1:1 (Spring 1986): 49.
119. The Five-County Research, Evaluation, Analysis & Liaison Group, Recommendations on the Proposed Monitored Retrievable Storage Facility at the Hartsville TVA Nuclear Plant Site, November 1985: 2.1-2.2.
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159. State of Tennessee, Department of Health and Environment, Environment Policy Group, "A Statement of Reasons in Support of a Notice of Disapproval of a Proposed Monitored Retrievable Storage Facility at the Clinch River Site, Oak Ridge, Tennessee," *Nashville*, May 4, 1987: i-ii.

160. The MRS Commission consists of 3-members appointed by, and serving at the pleasure of, the President pro tempore of the Senate and the House Speaker. They were authorized to study the MRS with staff investigations and public hearings.
161. The Amendments do not specify the subcommittee structure proposed originally by DOE--leaving this to be settled in the agreement. Members of the Review Panel are appointed to four year terms, and in the same fashion as their counterparts in the proposed MSC. One difference, which could prove very significant depending upon the circumstances, is that the DOE-MSC provided for one member "representing the utilities paying into the Nuclear Waste Fund," while the RP includes for one member to "represent persons making payments" into the NWF. The original DOE language would appear to require an industry representative on the monitoring board, while the NWFAA might well allow for a utility rate payer.