FROM DAD TO TRAIN: EVOLUTION OF STATE-FEDERAL RELATIONS IN RADIOACTIVE WASTE TRANSPORTATION*

In Memory of Lori Friel

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ABSTRACT

State-federal relationships concerning transportation of nuclear wastes changed significantly from 1984 to 1992. At the beginning of the period, federal agencies generally practiced "decide, announce, and defend" (DAD) approaches. They gave little credence to the concerns of state, local, or tribal officials.

Beginning in the mid-1980's, the US Department of Energy (USDOE) entered into a series of cooperative agreements with regional and national organizations of state and tribal officials to examine nuclear waste transport issues. One of the first agreements was reached with the Western Interstate Energy Board (WIEB). The cooperative agreements have been a major factor in changing approaches, attitudes, and understanding about nuclear waste transportation.

The dialogue undertaken through WIEB produced much more open, predecisional involvement by state officials in planning for transport of radioactive materials, increased mutual respect for state and federal technical competence, and facilitated a clearer understanding of the political, technical, and regulatory dimensions that make transportation such a challenge to nuclear waste disposal programs.

Lori Friel, staff attorney for WIEB, who died from leukemia in mid-1992, played a major role in bringing about these changes. This paper records her impact.

The changed relationships discussed in the paper have to some extent been institutionalized in USDOE's Transportation Assessment and Integration (TRAIN) project, and in the functioning of the Department's Transportation External Coordination (TEC) Working Group.

A CHANGED RELATIONSHIP

In the early to mid-1980's, the US Department of Energy (USDOE) and other federal agencies displayed a somewhat "exclusive" attitude in regulating and planning for transport of radioactive wastes. The position was based on three strong premises:

1. We (the federal agencies) have the necessary regulatory authority to assure that radioactive waste transportation is safe.
2. The historical record of such transportation is excellent. There have been no harmful accidental releases of radiation in transport. There have been far fewer accidents and potentially harmful incidents, on average, than in transporting other hazardous materials.
3. The form of the material shipped and the technical adequacy of shipping containers together assure that risk of unplanned or harmful releases of radiation is extremely low.

However, agency spokespeople sometimes went on to conclude that public concern over, or opposition to, transport of radioactive wastes results either from failure to understand the situation or from deliberate manipulation of "not in my back yard" emotions for political purposes. State, local, and tribal officials felt their authorities and responsibilities were dismissed by such arguments.

Federal officials were reluctant to reopen regulatory or planning decisions that already had been made, or to consult state, local, or tribal officials, let alone the public, before decisions were made.** The federal agencies argued that only they had the responsibility, the regulatory authority, and the technical knowledge and capability to manage nuclear waste transportation.

State-federal interactions concerning radioactive waste transport, in this period, tended to polarize. Federal officials defended the record and their technical findings. State, local and tribal officials viewed with alarm and asked "But what about X?" kinds of questions. The latter clearly reflected a growing level of public concern (1). State, local, and tribal officials also felt frustration that they, who would be primarily--and visibly--responsible for responding to actual emergencies, had not been consulted in reaching the conclusion that there was nothing to worry about.

Planning for nuclear waste shipments by USDOE generated institutional changes. Principal drivers were anticipated shipments of commercial spent fuel to a high-level waste repository or monitored retrievable storage facility, and

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** An early exception was U.S. Department of Transportation's Guideline document HM 164, which defined procedures for designating alternate highway routes.

expected transport of transuranic wastes to the Waste Isolation Pilot Plant (WIPP).

Initially, USDOE's Office of Civilian Radioactive Waste Management (OCRWM), guided by section 9 of the Nuclear Waste Policy Act of 1982 (2), took the position that its role was limited to planning for the logistics of shipments only. The regulatory and emergency response aspects of transport safety were considered beyond its authority.

However, OCRWM also had a mandate to involve potentially affected state, tribal and local entities in siting its facilities. Officials in OCRWM recognized that transport issues would be of concern, and included transportation in their consultations with affected states and tribes. There was no mandate to support consultation with corridor states; but cooperative agreements with interstate and intertribal organizations provided a vehicle to involve representatives from these governments.

The cooperative agreements began primarily as a means to disseminate information. But they quickly evolved two-way communication, as Runyon et al. have pointed out in their paper on the National Conference of State Legislatures' agreement (3). Developments under the Western Interstate Energy Board (WIEB) cooperative agreement, discussed below, illustrate how this two-way communication evolved.

In recent years, not only OCRWM, but USDOE as a whole, and other involved federal agencies have become more willing to consult with state, local and tribal officials concerning nuclear waste transport. The federal agencies are more open to questions and advice before decisions are made--even in relatively "technical" and "exclusively federal" areas like transport cask design.

This change is seen in the development of USDOE's Transportation Assessment and Integration (TRAIN) project. To a limited extent, external parties, including state and tribal governments, provided input for or reviewed drafts of the TRAIN report. The report's recommendations include strengthening the process by which USDOE "transportation specialists and representatives of the public interest exchange information and work to develop a safer, faster, cost-effective transportation system." (4)

The TRAIN report has been implemented, in part, by formation of a Transportation External Coordination (TEC) Working Group, jointly supported by OCRWM and USDOE's Transportation Management Division, located in the Office of Environmental Restoration and Waste Management. The TEC Working Group Charter defines the group's objective as interaction "with representatives of organizations at the state, tribal, and local levels who are working cooperatively with DOE, to obtain input for program needs assessment, development and management, and to enhance their capability to carry out transportation emergency preparedness and safety activities specifically related to radioactive materials shipments."(5)

These statements reflect USDOE'S greater willingness to consult with state and tribal groups before programmatic decisions are made, and to acknowledge their enforcement, emergency response, and training needs. Both sides continue to be cautious lest their various constituents perceive them as being overly collaborative.

"BIG-PICTURE" FACTORS AFFECTING STATE FEDERAL RELATIONS

The specific WIEB cooperative agreement experiences that changed state-federal relations regarding nuclear waste transport took place within the context of two "big-picture" developments. We will briefly describe these developments before turning to the impacts of the WIEB cooperative agreement.

Broad Shift in Attitudes about Public Involvement

Since the late 1970's, Americans have developed a different set of expectations about public involvement in governmental decisions. This is especially true of decisions concerning technological hazards that are or may be close at hand. James Creighton has described this as an evolution from providing information about a decision already made, to providing a formal opportunity for hearing public concerns before a decision is finalized, to providing *the public an* opportunity to influence a decision, to dispute resolution, in which all parties agree to a decision (6).

The processes established in Sections 112 and 116 of the Nuclear Waste Policy Act of 1982, clearly incorporated the second stage identified by Creighton, and reached toward the third--providing the public the opportunity to influence decisions. In fact, the legislative provisions for involving states, tribes, and the public were significant milestones. (For a discussion of how these provisions did and did not work, see the principal author's "Politics vs. Science in Nuclear Waste Repository Siting".(7))

The governmental and scientific communities' emphasis on risk communication as a counterpart to risk assessment and risk management is another sign of the increasing tendency to involve the public earlier, and to hear public concerns more openly, in programs dealing with technological hazards. The importance of early, informed, and influential "stakeholder" involvement in decisions regarding cleanup of USDOE nuclear weapons production facilities, for example, has now become a common theme (8, 9).

Transportation Becomes a Central Issue in Nuclear Waste Disposal

It appears that the parties who collaborated in drafting the Nuclear Waste Policy Act thought that transportation would be a relatively minor issue. The safety record was excellent; demonstrable risks to anyone along a transportation route were extremely low. The "not in my back yard" (NIMBY) syndrome was anticipated in facility siting, but not in transport of wastes.

This perception was altered by several events. Perhaps the most important was the reaction to the proposed selection of a monitored retrievable storage (MRS) site in Tennessee. The state and others who objected to the siting process used transportation analyses and arguments prominently among their tools of opposition (10). The Supplemental Environmental Impact Statement on the Waste Isolation Pilot Plant drew hundreds of comments related to transportation. (11) Earlier, in 1985, the US Nuclear Regulatory Commission and the US Department of Transportation held a not-particularly-well-advertized meeting in Chicago for state officials on waste transportation. Attendance, two or three times greater than expected, astonished the conveners. Attendance also exceeded expectations at an OCRWM transportation workshop held later that year in Atlanta.

Congress reflected the growing significance of the issue in the Nuclear Waste Policy Amendments Act of 1987(12). Section 180(c) requires USDOE to provide technical assistance and funds to states for training local and tribal officials

through whose jurisdictions high-level waste shipments were proposed.

An auto-train collision that occurred while a cask of damaged nuclear fuel from the Three Mile Island plant was being switched in its journey to the Idaho National Engineering Laboratory led to a congressionally-mandated investigation of rail route and carrier selection. In 1986, USDOE truck shipments diverged from USDOT routing rules in Colorado, Nevada, and Utah, bringing sharp objections from state officials.

In a number of cases, shipments of radioactive waste were delayed, diverted, or prohibited by action of state and tribal officials. Without elaboration, here are some of the instances:

Transport of foreign research reactor fuel through Puget Sound ports. A citizen challenge led the federal courts led to require USDOE to prepare an environmental assessment. These shipments were diverted to an east coast port.

Rocky Flats transuranic wastes to Idaho National Engineering Laboratory. The Governor of Idaho threatened to interdict transport. USDOE did not immediately challenge his decision. The shipments were not made.

Shipment of spent fuel from Fort St. Vrain reactor to Idaho. Delayed initially by legal challenges from State of Idaho and the Shoshone-Bannock Tribes, these shipments were subsequently deferred when the utility decided to construct a long-term spent fuel storage facility on-site.

Shipment of additional foreign research reactor fuel through west coast ports. Washington, Oregon, California, and Idaho strongly challenged the environmental assessment and proposed Finding of No Significant Impact issued by USDOE to cover future shipments of foreign research reactor fuel. No decision to proceed has been announced by USDOE since close of comment in mid-1991.

Return of Hanford cesium capsules from Colorado sterilizer. Originally proposed in late 1991, these shipments were delayed by Colorado's objections, pending development of a cooperative safety plan between USDOE and five states.

These instances illustrate how the pattern of state-federal relations described at the beginning of the paper often led to confrontation and delay. In some cases, USDOE then went back to work with state, tribal, and local governments to plan acceptable safety measures (13). This was more productive where some working relationships already existed, such as those centered on shipments to the Waste Isolation Pilot Plant.

The specific contributions of the WIEB cooperative agreement took place against this backdrop of changing state, tribal, and public involvement in nuclear and technical hazard issues, and increasing evidence that transportation concerns are a critical part of nuclear waste management.

IMPACTS OF THE WIEB COOPERATIVE AGREEMENT

The Western Interstate Nuclear Board (WIEB) was established by interstate compact in 1970. The compact was ratified by 12 western states and the federal Government. In 1977, the states' governors expanded the Board's activities to include other energy activities, forming the Western Interstate Energy Board. Funded by state dues, the Board fosters cooperation among the member states and with the federal government on a broad range of energy issues.

Members of the Board were involved in consultations in the late 1970's and early 1980's that led to passage of the Nuclear Waste Policy Act. In 1984, WIEB entered into a contract with USDOE to hold regular discussions between USDOE and western states on high-level waste transportation. A High-Level Waste Committee was formed. The contract became a cooperative agreement in 1985.

The High-Level Waste Committee has since functioned under a series of cooperative agreements. At an early stage, its members recognized that western states would be impacted heavily by transport of spent nuclear fuel to a western repository site--whether in Utah, Washington, or Nevada. The Committee's goal in participating with USDOE was to assure a safe, publicly acceptable system for transporting NWPA shipments.

A major role of the High-Level Waste Committee was to assist WIEB staff in developing and disseminating information about nuclear waste transport. The "Spent Fuel and High-Level Radioactive Waste Transportation Primer," originally issued in 1985 and frequently updated since, became both a model for other organizations and a basic resource for state officials dealing with nuclear waste transport issues. High-Level Waste Committee members also helped WIEB staff gather state-by-stage information on emergency preparedness and training to be used by USDOE in its program planning.

The meetings of the High-Level Waste Committee became a regular forum for the exchange of information and views between USDOE, USDOT, USNRC, and state officials concerned with nuclear waste transportation. In recent years, the committee also has been able to include utility, shipper, and public interest group representatives in its discussions.

In the five topical areas below, the work of the High-Level Waste Committee contributed specifically to an improvement in state-federal relations concerning radioactive waste transportation. In each case, Lori Friel, WIEB staff attorney, played an important role as analyst, facilitator, advocate, and problem-solver.

USDOT Preemption Rulings

As a significant element in the WIEB "Primer", Lori Friel provided analyses of the USDOT's "preemption" rulings under the Hazardous Materials Transportation Act (HMTA), including the guidelines covering state and local efforts to regulate nuclear materials transportation. The analyses were updated as new rulings emerged.

This work affected state-federal relations in several ways. First, the analyses were used by several western states in developing legislation. This reduced the likelihood of legal or political confrontation (though neither, certainly, was eliminated). Legislation adopted in Colorado and Oregon, as well as measures proposed in Washington. attempted to accomplish state objectives within the limits set by the courts.

Second, face-to-face dialogue between USDOT and state representatives about the rulings helped each understand the concerns and constraints of the other, reducing the likelihood of misinformed public confrontations. Third, the background provided in Friel's work was used by state officials in developing their positions on and responses to the various bills in Congress that eventually led to the Hazardous Materials Transportation Uniform Safety Act of 1990 (HMTUSA) (14).

Preparing for WIPP Shipments

Proposed shipments of transuranic wastes to the Waste Isolation Pilot Plant (WIPP) were beyond the scope of WIEB's cooperative agreement However, the WIEB Committee and key program people at USDOE felt strongly that preparation for these shipments should assure their safety and acceptability. The relationships between USDOE and the states through the Committee provided a starting point to work on WIPP transportation issues. Since the WIPP shipments would come much sooner than high-level waste transport to an MRS or repository, they would provide an opportunity to implement and evaluate some of the Committee's proposals.

As a result of discussions initiated by WIEB in 1986, USDOE agreed to submit WIPP transportation casks to USNRC licensing, to select shipping routes in advance, and to provide training to first responders along the shipping routes. In the following year, the Committee, with USDOE support, organized discussions to resolve WIPP routing differences among states. Implementation was passed to the Western Governors' Association (WGA) to assure funding of individual states' preparations for WIPP shipments.

For many, the cooperative effort that has evolved regarding WIPP shipments has become a model for state-federal relations in the field of nuclear waste transportation (13). While this view is not universally held, the WIPP model has strongly influenced USDOE's TRAIN and TEC Working Group initiatives.

Routing

By 1987, it had become clear to the WIEB High-Level Waste Committee that routing is a critical factor in planning for waste shipments. State and local governments have significant responsibilities in areas such as emergency preparedness and response, emergency medical care, inspection and enforcement, and roadway conditions. Planning any sort of safety measures, estimating resource needs, and addressing public concerns all require knowing where shipments will (and will not) move. The High-Level Waste Committee's "Strategic Plan", published early in 1988, showed the key role routing plays in providing safe, publicly acceptable transport.

High-Level Waste Committee members also argued that USDOE must initiate an interstate routing process for high-level waste shipments. To leave choice of routes up to contract carriers, as USDOT regulations assume and as OCRWM insisted was appropriate, would both heighten public opposition and create interstate political conflict. The Committee worked for more than a year to develop its 1988 paper, "Route Selection for Shipments to a High-Level Radioactive Waste Repository". The recommendations in the paper were endorsed both by Western Interstate Energy Board and the Western Governors' Association.

Finally, in 1991, Dr. John Bartlett, director of OCRWM, met with the Committee and agreed to give serious consideration to the WIEB routing recommendations. They became the focus of a discussion with various USDOE and industry elements at OCRWM's Transportation Coordinating Group meeting early in 1992.

Lori Friel played a key role in developing both the routing recommendations and the Committee's strategic plan.

Cask Development

Perhaps no area was regarded as more exclusively federal nor less comprehensible to the non-technical community than development and testing of spent fuel transport casks. On the other hand, since cask containment was touted as the most important protection for both emergency responders and the public, the latter parties naturally expressed concern about cask safety.

WIEB's High-Level Waste Committee recognized the importance of cask safety both to emergency preparedness and training, and to public acceptability. The Committee held an initial cask safety workshop with USDOE and USNRC in 1986. This was followed by insistence on scrutinizing OCRWM's development and evaluation of proposals for a "new generation" of from-reactor rail and truck casks.

The Committee's initial requests for involvement were met with some reluctance; however, by 1990, the committee's extensive comments on from -reactor cask designs were thoroughly considered and meticulously responded to by OCRWM. In the meantime, the Committee also invited USNRC and Lawrence Livermore Laboratories to conduct a workshop on the "Modal Study," the USNRC-commissioned assessment of the adequacy of its cask performance standards (13). The workshop improved communication; it also led to mutual respect for the concerns and insights of both technical and policy people.

Again, Lori Friel provided the analyses, arranged the workshops and exchanges, and followed up on questions and comments so that this constructive dialogue could take place.

Modal Choice

The WIEB High-Level Waste Committee also recognized, early on, that choice of transportation mode for the bulk of high-level waste shipments would affect western states significantly. There were several issues: routing; safety tradeoffs between fewer, larger shipments by rail and potential impact of an accident involving more material; relative physical condition and constraints of rail and highway corridors; emergency access to private railway property; and public visibility and acceptability of shipments.

The Committee's work was pulled together in an expanded section of the WIEB high-level waste transportation primer entitled "Legal, Technical, and Business Aspects of Rail Transportation." This work, in turn, opened the door to a dialogue between the committee and the USDOT team researching the relative safety of dedicated trains, as required by HMTUSA. Technical, safety, and policy questions concerning rail vs. highway transport continue as a major agenda item for the WIEB committee.

OCRWM also has kept the Committee informed of--and sought its comments on--research to determine accessibility of reactor sites to rail, barge, and overweight or standard highway transport casks. The WIEB Committee has provided a forum for a constructive, cooperative exploration of the complex factors involved in modal choice.

Again, Lori Friel conducted much of the Committee's research on rail issues. She played a key role in helping all parties understand the links between different aspects of the complex modal choice picture.

In all five of these specific cases, a new way of doing business has evolved. The common elements of that new way are:

1. A two-way, or often multi-way, exchange of information and perspectives;
2. A growing recognition that the political and public acceptance and technical issues surrounding nuclear

waste transportation are interdependent and more likely equal than was earlier thought;

3. Increased respect among parties for the knowledge and insights each brings to the table; and
4. An increased willingness on the part of federal officials to attempt consultation at "draft" or "predecisional" stages.

These elements grew out of the thorough, competent, clear, balanced, and insistent staff work done by Lori Friel and her colleagues at WIEB. They were nourished by Lori's personal, sensitive efforts to facilitate constructive encounters among many different interests. Many program people at USDOE and other federal agencies recognized and responded to the need and the opportunity to forge better working relationships. To the extent the larger picture of state-federal relations about nuclear waste transport have improved, one can see the impact a single individual has made.

LOOKING AHEAD

The WIEB experience indicates that federal, state, tribal and local officials can work cooperatively and respectfully to develop approaches to nuclear waste transportation that are safe and acceptable. Safe and acceptable, in this case, means not only in the minds of technical experts, but to accountable state, tribal and local officials, and the public as well. Only then can transportation be looked at as part of the solution to nuclear waste disposal problems, rather than as an obstacle to doing anything about the wastes.

But more needs to be done. All parties need to develop a better understanding of the linkages between extra safety measures, accountability of officials, and public acceptance of transportation activities. All parties, federal, state, tribal and local alike, must be more willing to share decision-making about the acceptable balance among risks with the public.

Finally, responsible federal agencies need to better appreciate that distinctions between programs, waste types, funding sources, and regulatory regimes do not wash well with the public. If transport of one type of nuclear waste is to be regarded as acceptably safe, then there must be confidence in the measures taken in transporting all types. That is why WIEB and western states have argued strongly for using the WIPP transport program as a model, while testing some of its procedures and protocols on other shipments. And that is why state and tribal officials have urged that the same kind of openness, planning, and preparation that have evolved for WIPP and OCRWM shipments be applied to all federally-managed shipments.

TRAIN and the TEC Working Group suggest that USDOE is moving in the right direction. States, tribes, and local officials should both welcome and push to accelerate this movement. Hopefully, other involved federal agencies will support, rather than resist, USDOE's positive steps.

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