

**WIPP Transportation Safety Program:
A Model Framework for Collaboration among States and Agencies in the
Transportation of Radioactive Waste**

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ABSTRACT

The Western Governors and the State of New Mexico have developed a comprehensive program to assure the safe and uneventful transport of transuranic waste to the U.S. Department of Energy's (USDOE) Waste Isolation Pilot Plant (WIPP).

New Mexico established the Radioactive Waste Consultation Task Force. Its primary responsibility has evolved into advising the Governor on all policy issues regarding the transportation of radioactive waste through New Mexico. Membership includes the State Fire Marshal and the cabinet secretaries for Energy, Minerals and Natural Resources, Environment, Health, Transportation, Public Safety, and soon to be added Homeland Security and Emergency Management. It also includes two non-voting advisory members, Chairman and Vice-Chairman of the New Mexico Joint Interim Legislative Radioactive and Hazardous Materials Committee.

New Mexico's Role as the host state for WIPP is large, dynamic, and challenging. New Mexico's governor has traditionally been the Western Governors' Association's (WGA) co-chair on radioactive waste transportation issues along with the governor of Idaho. Collaboration on the details of radioactive waste transportation is handled through the WGA WIPP Transportation Technical Advisory Group (TAG).

Over a twenty-year period, the TAG and the USDOE, through negotiation & cooperation, have developed, refined, and maintained transportation safety protocols and procedures that are detailed in the *WIPP Transportation Safety Program Implementation Guide* (Guide) [1]. The requirements specified in the Guide include:

- High quality drivers and carrier compliance
- Independent driver, vehicle and cask Inspection
- Safe parking during abnormal conditions
- Advance Notice of WIPP shipments/tracking/etc
- Medical Preparedness
- Bad weather protocols

It is the continued partnership between twelve western states, other US regional organizations like the WGA, and the USDOE that ensures that the needs and concerns of all affected populations continue to be assessed and addressed. Through the combined influence of states joining in regional organizations, individual states gain the strength they need to stand up for states' rights in the transportation of radioactive waste.

INTRODUCTION

The Waste Isolation Pilot Plant (WIPP) is the world's only permanent underground repository for nuclear waste. It is owned by and operated under the auspices of the U.S. Department of Energy (USDOE) as the United States of America's repository for "defense-related" transuranic wastes. WIPP received its first shipment of non-mixed transuranic waste on March 26, 1999 from the Los Alamos National Laboratory in New Mexico. Since that time, WIPP has received more than 6,000 shipments from eight different USDOE waste generator sites. Those shipments carried over 93,000 containers (55 gallon drums, standard waste boxes, and remote handled waste canisters) with over 51,000 cubic meters of transuranic (TRU) waste to be buried 2,150 feet below ground in a salt bed at WIPP.

BACKGROUND

In 1955, the U.S. Atomic Energy Commission (USAEC) asked a committee of the National Research Council to examine the issue of permanent disposal of radioactive wastes. The committee subsequently concluded that "...the most promising method of disposal of high-level wastes at the present time seems to be in salt deposits," [2]. In 1962, the U.S. Geological Survey (USGS) reported on the distribution of domestic salt deposits that may be suitable for radioactive waste disposal. The Permian Basin (which includes the Delaware Basin in southeastern New Mexico and large parts of Kansas, west Texas, and Oklahoma) was one of the regions identified in the USGS report. In 1970, the sight of an existing salt mine in Lyons, Kansas was selected by the USAEC as a potential location for a radioactive waste repository; but in 1972, the Lyons site was judged unacceptable. Subsequently, in 1973, the nation-wide search for a suitable salt site resumed, resulting in the selection of a portion of the Permian Basin in southeastern New Mexico. [3]

At that point, it became clear that the citizens of New Mexico would have a large stake in the location of the coming permanent radioactive waste repository. Therefore, in 1975, New Mexico Governor Jerry Apodaca established a "Governor's Advisory Committee on WIPP," consisting of 10 individuals from New Mexico's scientific and academic community [3]; and, in 1979, the New Mexico Legislature started the state's formal planning process to deal with the possibility of WIPP by creating the Radioactive Waste Consultation Task Force.

Eight years later, New Mexico began working with a coalition of western states through the Western Governors' Association, to develop a transportation system whose goal is the safe and uneventful transport of radioactive materials in and through the West. The WIPP Transportation Safety Program is a cooperative effort among the shipment-corridor states, tribes, local officials and the USDOE. There are no other shipments on U.S. highways that have undergone as much scrutiny by transportation safety specialists as WIPP shipments.

INTERGOVERNMENTAL PARTNERSHIP

Two documents became pivotal to establishing the foundation for the collaborative working relationship between states and the USDOE.

In 1982, "in order to foster an intergovernmental partnership" and as a means to involve states and local government in consultation on federal programs that impact those jurisdictions, U.S. President Ronald Reagan signed *Executive Order 12372 Intergovernmental review of Federal programs* [4, p. 1].

On October 30, 1992, U.S. President George H.W. Bush signed the *WIPP Land Withdrawal Act* [5] which reaffirms host state regulatory oversight and assures the provision of financial, technical and other assistance to any state through which shipments were being contemplated. Additional considerations were made specifically in the areas of transportation safety programs, emergency preparedness, and communication strategies.

In concert at this time, the Western Governors expanded their interests to include radiological waste transportation issues in addition to other societal, environmental or health issues of importance to their constituents.

THE WESTERN GOVERNORS' ASSOCIATION

History of Western States' Collaboration

Beginning in the 1980s, states potentially affected by the [USDOE's] decision to transport TRU waste to WIPP began preparing for the shipments, and in 1988, united to work on common problems. In that year, the WGA received funding from the U.S. Department of Transportation to prepare a report to the Congress on the "opinions, concerns, and priorities for actions" of the seven Western states expected to experience the greatest impact from the initial shipments. These states had formed a task force under the umbrella of the WGA to make recommendations that would enhance the safety of and public confidence in the shipments. The task force, whose efforts culminated in the June 1989 Report to Congress, emphasized that a collaborative, regional approach to planning would be a key step toward developing and implementing a credible accident prevention and safety program for transporting TRU waste. States recognized certain elements of any program developed would vary from state to state. Nonetheless, they were committed to finding ways to make as uniform as possible certain components of a safety program, such as inspection standards, parking requirements, procedures for avoiding bad weather, and other safety controls. States believed uniformity could be accomplished if these elements were built from existing state truck inspection programs, lines of communication, and emergency preparedness training, plans and equipment. In the [June 1989] Report, Western states expressed their willingness to work together and with the [USDOE] to resolve identified problems. Finally, states recognized that their commitment to shoulder responsibility for the shipping campaign would depend on consistent and assured financial support.

After the report was issued, the Secretary of Energy agreed that funding Western corridor states would be a necessary component to the development and implementation of a transportation safety program and began to provide funds to Western states through a cooperative agreement entered into with the WGA in late 1989. The vast majority of the funds the WGA has received have been passed through to the states under Service Agreements to carry out identified tasks such as planning, training, and other elements contained in the Program Implementation Guide. The original cooperative agreement (including funding to support the agreement) has been superseded with one that will expire [December 31, 2009]. [6, p. 6-7]

The WGA Technical Advisory Group

Through the funding provided by the cooperative agreements with USDOE, the WGA formed the WIPP Transportation Technical Advisory Group (TAG). Member states of the TAG are Arizona, California, Colorado, Idaho, Nebraska, Nevada, New Mexico, Oregon, Texas, Utah, Washington, and Wyoming. Since the inception of the program, these states have worked together and collaborated with the USDOE to develop the WGA WIPP Transportation Safety Program Implementation Guide (Guide), thus establishing the mission of the safe and uneventful transport of radioactive waste in and through the West.

[The Guide] presents the overall transportation issues, objectives, approaches and procedures which were agreed to by the Western Corridor State Governors and the [U.S. Department of Energy (USDOE)] through a Memorandum of Agreement signed in 1996. These issues, objectives, approaches and procedures govern the conduct of the [USDOE's] highway transportation of transuranic waste through the Western States.

[The] Guide is based upon WGA policy resolutions, enhanced safety standards, [USDOE] orders and guidelines, and carrier contract agreements. It includes procedures developed cooperatively by the Technical Advisory Group and the [USDOE] Carlsbad Field Office (DOE-CBFO).

...[The] Guide, and supporting documents, address accident prevention, emergency response preparedness, medical preparedness, public information, and route designation... [1, p. i]

It is important to draw special attention to the Memorandum of Agreement that the Governors and USDOE promulgated regarding the Guide because it focused on several essential principles such as:

- mutual endorsement of the regional planning and dialogue processes;
- reaffirming the mutually beneficial objective of safe and uneventful transportation of defense generated waste; and
- full endorsement of the principles of the Guide as a living document that reflects the continuing agreements in the planning and dialogue process.

The Guide was developed to directly correlate to the four main components of the 1989 *Report to Congress* which were: Accident Prevention, Emergency Preparedness, Public Information, and Other State and Regional topics. Thus, the Guide was further delineated into the following thirteen functional areas:

- High quality drivers and carrier compliance
- Independent driver, vehicle and cask inspections
- Bad weather and road conditions
- Safe parking during abnormal conditions
- Advance notice of WIPP shipments, shipment tracking, and shipment status
- Medical Preparedness
- Mutual aid agreements across states and tribal lands for accident response
- Emergency response plans and procedures
- Emergency response equipment
- Training and exercises for emergency responders
- Public information and participation
- Highway routing of WIPP shipments
- Program evaluation. [1, "Table of Contents"]

The sections were developed through years of studying states' needs, public concerns, and possible risks connected with radioactive waste transportation. The program's foundation is in the winning of public confidence through ensuring that the waste is transported in robust containers, transported safely, and that emergency response capabilities are sophisticated enough to effectively manage the aftermath of possible accidents. Since 1994, the Guide has served as a model for the development of transportation protocols for other radiological transportation campaigns across the entire nation.

Regional Activities

The WGA modeled the way for other regional collaboration groups across the nation to enter into similar programs for effective management of WIPP transportation issues and negotiations with USDOE. These organizations are found in the eastern, southern, and midwestern sections of the nation. As a model, the concepts within the Guide have been closely mirrored by the other regional organizations so that essentially all states affected by WIPP shipments adhere to the same principles.

The WGA TAG along with the other regional organizations continues to meet regularly (two to three times per year) to assess the continuing effectiveness of the Guide and the WIPP Transportation Safety Program and to deal with ongoing concerns. The states have truly benefited by the synergy of having combined into regional organizations because each region negotiates as one entity with the USDOE creating the perfect illustration of the “whole being greater than the sum of its parts.”

Lastly, regional organizations, along with industry and tribal stakeholders, come together twice a year as USDOE’s Transportation External Coordinating Working Group assuring issues across the nation are brought to the table for all parties to discuss and negotiate. Through the combined influence of states joining in regional organizations, individual states gain the strength they need to stand up for states’ rights in the transportation of radioactive waste.

Let’s turn now to the important role that the host state of the WIPP facility maintains on behalf of their state and for the nation.

NEW MEXICO

New Mexico’s role as the host state for WIPP is large, dynamic and challenging. In addition to dealing with the transportation issues on all WIPP shipments, New Mexico has elected to take a leadership role in managing WIPP issues in the West, which includes being responsive to the public concerns of all western states and the country as a whole. And on the home front, New Mexico has had to deal with:

- conflicting public perception concerns;
- issuing and monitoring, by the NM Environment Department (NMED) Hazardous Waste Bureau, the U.S. Resource Conservation and Recovery Act (RCRA) permit for WIPP’s operation as a mixed waste facility; and
- monitoring of the WIPP facility’s performance by an independent technical oversight entity – this role is currently shared by the PECOS Management Group and NMED’s USDOE Oversight Bureau.

In keeping with New Mexico’s leadership role, New Mexico’s governor has traditionally been the Western Governor Association’s (WGA) co-chair on radioactive waste transportation issues along with the governor of Idaho; and correspondingly the WGA TAG has been co-chaired by gubernatorial representatives from New Mexico and Idaho.

Beginning in May 1, 1981, the USDOE and the State of New Mexico held their first meeting of “consultation and cooperation” to discuss major issues facing the WIPP project and to ensure that sound science was at its foundation. By July 1, 1981 both United States Secretary of Energy, James B. Edwards, and Governor of New Mexico, Bruce King, had signed the *Agreement for Consultation and Cooperation* which specified that the parties would continue such meetings and that they would happen on a quarterly basis. It was 17 years, eight months, and 25 days later that WIPP received its first shipment of waste.

Without the regular and open exchange of information that ensued from the WIPP Quarterly Technical Review Meetings, WIPP might still be waiting for that first shipment. October 10, 2007 marked the date of the 100th WIPP Quarterly. In the USDOE press released regarding the event, USDOE Carlsbad Field Office Manager, Dr. David Moody, proudly stated, “The WIPP quarterly meetings are a long-standing part of WIPP history. They helped establish a strong tradition of information sharing and cooperation with our state regulators, state oversight groups and interested stakeholders throughout the years.”

Public Interest

The New Mexico public has had severely conflicting feelings about WIPP’s existence and location from the moment of WIPP’s inception. Public opinion can be generally divided into three major groups: those opposed, those for, and those standing on the sidelines. The pro-WIPP population mostly resides in southeastern New Mexico because this is the area that has the greatest economic benefit from WIPP’s location. Members of the anti-WIPP faction reside mostly in northern New Mexico because WIPP shipments go by their homes presenting a strongly perceived risk and no obvious benefit. Those on the sidelines usually live away from WIPP routes or regions directly affected by WIPP, or they are recent immigrants to New Mexico and are largely unaware of the over thirty years of controversy.

Radioactive Waste Consultation Task Force

In order to effectively manage the concerns of the New Mexico citizenry as the possibilities of WIPP were being considered, New Mexico established the Radioactive Waste Consultation Task Force (Task Force) in 1979. The Task Force was established through the enactment of the “Radioactive and Hazardous Materials Act” (Act).

The Act specifies five primary duties for the Task Force:

- Negotiate for the State of New Mexico with the federal government in all areas relating siting, licensing and operation of new federal disposal facilities, including research, development and demonstration, for high-level radioactive wastes, transuranic radioactive wastes and low-level radioactive wastes.
- Recommend legislation to implement the state’s policies with respect to new federal disposal facilities.
- Identify impacts of new federal disposal facilities and then disseminate that information.
- Coordinate investigations and studies undertaken by all New Mexico state agencies, forwarding results to the Governor and the Legislature.
- Meet regularly with the Interim Legislative Radioactive and Hazardous Material Committee, keeping them apprised of Task Force activities and actions.

Over time and in collaboration with other states through the WGA TAG, the Task Force’s primary responsibility has evolved into advising the Governor on all policy issues regarding the transportation of radioactive waste through New Mexico.

Membership in the Task Force includes the State Fire Marshal and the cabinet secretaries for Energy, Minerals and Natural Resources, Environment, Health, Transportation, Public Safety, and – soon to be added – Homeland Security and Emergency Management. It also includes two non-voting advisory members, Chairman and Vice-Chairman of the New Mexico Joint Interim Legislative Radioactive and Hazardous Materials Committee. The Task Force is chaired by the Secretary of Energy, Minerals and Natural Resources.

CONCLUSION

The success of the entire program has relied heavily upon the commitment of all parties to the concepts of open communication, collaboration, and cooperation. The result is a system that meets the diverse needs of its many participants moving continually towards the goal of safe and uneventful transportation of radiological wastes across the United States.

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