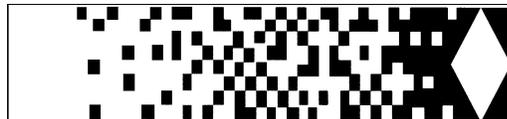


Overview of the Section 180(c) Program: History, Lessons Learned, and Potential Next Steps

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April 18, 2011



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I. Introduction

The U.S. Department of Energy's (DOE) Office of Civilian Radioactive Waste Management (OCRWM) is responsible, under the Nuclear Waste Policy Act of 1982, for the transportation of spent nuclear fuel and high-level radioactive waste from point of origin to destination at a federal storage or disposal facility. Section 180(c), written into the Nuclear Waste Policy Act Amendments of 1987, requires OCRWM to prepare public safety officials along the routes for these shipments.

From 1998 to 2008 OCRWM attempted to design and implement a program that met the requirements of Section 180(c) of the Nuclear Waste Policy Act. Their efforts, while successful in part, were hindered by several factors. This paper investigates those factors and distills the experience into options about Section 180(c)'s potential role in future shipments.

This paper is divided into four sections. The first section introduces the language of Section 180(c) and the major hurdles the OCRWM faced in implementing Section 180(c). It discusses how competing visions for Section 180(c)'s role within the transportation program hindered progress and how varying interpretations of the language of the Act led to shifting policy outcomes.

The second section tells the history of Section 180(c) by describing the three separate attempts OCRWM made to implement the program. It evaluates both the stakeholder participation process and the policy outcomes of each attempt. The lesson that should be drawn from this section is that the third attempt was very nearly successful and strongly supported by the stakeholders involved. The consultative model and the policy outcome it produced could easily be reconstituted and quickly implemented for future shipments of spent nuclear fuel and high-level nuclear waste.

The third section of this paper discusses similar grant and training programs operated by DOE and other federal agencies. This paper compares the scope, policy, and development process of these programs to OCRWM's handling of Section 180(c). Most of these programs were developed in the 1990s and are now functioning successfully. The DOE's Office of Environmental Management's (EM) Transportation Emergency Preparedness Program (TEPP) offers training and technical assistance for DOE's shipments of radioactive material and seems the natural partner for Section 180(c). The other programs offer lessons in designing and implementing programs to fund training and technical assistance but otherwise their scope does not overlap with Section 180(c)'s.

Section four summarizes the implementation options possible from OCRWM's experience and suggests the potential role for Section 180(c) in future shipments conducted under the Nuclear Waste Policy Act.

A. The Language of Section 180(c)

The language of Section 180(c) is quite specific. This specificity helped fuel divergent visions of Section 180(c)'s role in the repository program. Some OCRWM managers and staff envisioned the grant and technical assistance program as a potential nation-wide communications and trust building vehicle for OCRWM. Others viewed it simply as a statutory requirement to be narrowly met before shipments commenced. While this difference was rooted in conflicting styles of public sector management, the specificity of the language lent strength to the more limited interpretation.

Specifically, Section 180(c) states:

“The Secretary [of Energy] shall provide technical assistance and funds to States for training for public safety officials of appropriate units of local government and Indian tribes through whose jurisdiction the Secretary plans to transport spent nuclear fuel or high-level radioactive waste [to a NWPA-authorized facility]. Training shall cover procedures required for safe routine transportation of these materials, as well as procedures for dealing with emergency response situations.”

For ease of discussion it helps to frame the language as follows:

- **DOE must provide:** Funding and technical assistance for training
- **To:** States for public safety officials
- **Of:** local government and Indian tribes through whose jurisdiction the Secretary plans to transport these shipments
- **For:** training in procedures required for safe routine transportation and emergency response situations
- **For:** rail, truck, and barge modes (because OCRWM would use all three modes, not because it was in the language of Section 180(c))

As the conversation over Section 180(c) progressed, both DOE and stakeholders gained a common understanding of two key terms and phrases contained in the statute. They became commonly defined as the following:

- “Safe routine transportation” is viewed as the training of state and tribal inspectors in the Commercial Vehicle Safety Alliance’s Level VI inspection procedures.¹ The Revised Proposed Policy that OCRWM published in the *Federal Register* in 2008 included a list of allowable activities under the planning grant that addressed “safe routine transportation” activities. (See page 12)
- The language that funding was to “States for ... Indian tribes through whose jurisdiction the Secretary plans to transport these shipments” caused some difficulty. Sending funds through states to disburse to tribes, while not

¹ http://www.cvsa.org/programs/nas_vi_faq.aspx

unprecedented, violates the government-to-government relationship required of federal agencies working with Indian tribes. To clarify, and to keep Section 180(c) policy consistent with the DOE's American Indian Policy, the Office of General Counsel issued an opinion that DOE should distribute funds directly to eligible federally-recognized tribal governments. Funding for local governments would continue to flow down from the state.

The requirement for "training" in procedures for safe routine transportation and for emergency preparedness was hotly debated because states and tribes requested that Section 180(c) fund planning activities but these were not necessarily "training." For example, states wanted Section 180(c) funding to cover the cost of conducting a needs assessment along potential routes. DOE countered that funding should cover "training" to conduct these assessments, not the actual work conducted. DOE finally relented on this point but the language for "training" continually created these types of debates.

II. History of Section 180(c)

From 1988 to 2008, OCRWM took three distinctly different approaches to implement this section of the Act. The initial approach, from 1988 - 1992 was a consultative open planning process with stakeholders that ended without any policy decisions but with the publication of two documents describing OCRWM's implementation options and planning principles for the Section 180(c) program. In the second approach, from 1993 - 1998, DOE and contractor staff conducted the research and wrote several iterations of a Revised Proposed Policy that were then published in the *Federal Register*. Stakeholder input occurred during comment periods at public meetings and in written responses to the *Federal Register* Notices. The third attempt, from 2003 - 2008, returned to the consultative approach, published two *Federal Notices* setting forth OCRWM's policy on Section 180(c), and nearly resulted in an operational program.

How one designs a Section 180(c) program depends on the outcome or goals one hopes to achieve through Section 180(c). The predominant view within OCRWM held that it was a narrow statutory requirement that served no larger purpose in transportation planning. This viewpoint split into two camps. Some believed Section 180(c)'s goal was to simply provide funds to eligible jurisdictions regardless of whether it resulted in their readiness for shipments. The other camp believed the funding and technical assistance should result in public safety officials along the routes actually being prepared for shipments.

At the other end of the spectrum, some staff viewed Section 180(c) not only as a statutory requirement to prepare public safety officials along the route but as OCRWM's best opportunity for a national communications and outreach program to build trust and confidence in the entire repository program.

State and tribal officials had their own view of the purpose of Section 180(c) and were deeply frustrated at what they saw as OCRWM's frequently uncooperative attitude towards them and their role in planning and carrying out spent fuel shipments. The majority of public safety officials know radioactive materials shipments can be made

safely based on their experience with the Waste Isolation Pilot Plant (WIPP) shipments, cesium capsule shipments, spent fuel shipments from domestic and foreign research reactors, and other shipments of radioactive materials, their familiarity with the robustness of the casks, and their knowledge of the extensive regulatory requirements for these shipments. They consistently asked for a partnership with DOE to plan these shipments. Their concern is not that an accident will breach a cask, but that the reactions of uninformed public safety personnel such as fire fighters, nurses, emergency medical technicians, and police officers if an incident occurs in their jurisdiction might themselves hinder an effective response². The accompanying media storm of misinformation and public condemnation could leave those involved bruised and the program delayed indefinitely.

These competing views about the purpose of Section 180(c), and the role of state, tribal, and local officials in developing and operating the transportation system, buffeted the 20-year long development of the Section 180(c) program.

A. First Attempt 1988 – 1992

In the first attempt to implement Section 180(c), the OCRWM staff consulted stakeholders through the public information and interaction mechanisms in place at the time. They published two documents that set forth a schedule and consultation process that OCRWM committed to follow as it developed the Section 180(c) policy.

The interaction mechanisms in place during this time were the Transportation Coordination Group (TCG), the Transportation External Coordination (TEC) Working Group, and OCRWM's cooperative agreements with the four state regional groups -- the Western Interstate Energy Board, the Councils of State Governments Midwest and Eastern Regional Conference, and the Southern States Energy Board. The TCG was an OCRWM-only stakeholder group to whom OCRWM staff presented updates twice a year. Each meeting offered a public comment period but the format could not have been considered consultative. OCRWM did make an exception for Section 180(c) and met with a group of state and tribal officials after the July 1989 meeting to discuss possible coordination. The TCG meetings were discontinued in 1993 because of the emergence of the TEC working group. The TCG working group did not hold a second meeting.

The TEC organization, co-chaired by OCRWM and the Office of Environmental Management, was more consultative in nature. Participants self-selected into breakout groups to discuss and resolve issues with DOE staff. Its impact on Section 180(c) policy was minimal during this phase because TEC had only been formed in 1992 and the breakout groups had just begun to organize.

Section 180(c) was discussed at the regular meetings with the cooperative agreement groups, primarily the National Congress of American Indians, the Southern States Energy

² <http://coloradoindependent.com/38278/colorado-officials-yellowcake-uranium-trucks-can-go-wherever-they-want>

Board, the Councils of State Governments Midwest and Northeastern Regional Offices, and the Western Interstate Energy Board and the Commercial Vehicle Safety Alliance.

These consultations resulted in the release of two documents.³ The documents defined options for implementing Section 180(c), the planning principles that OCRWM would follow through implementation, and the consultative approach that would ensue. The work was halted before OCRWM made decisions regarding the design or specific implementation procedures of the Section 180(c) program.

The stakeholder response to the proposed schedule and plan was generally favorable because of the promised consultative approach. Since OCRWM did not announce any decisions regarding policy, there was little reason for negative reactions.

At this time, similar programs within DOE or other federal agencies could not provide an example for OCRWM because they were too new. The recently formed Office of Environmental Management had just begun to organize its array of field office and had not resolved how it was going to address emergency preparedness and route preparations. The Carlsbad Field Office had signed a cooperative agreement with the Western Governors Association in 1989 and had begun to negotiate their training and funding program. The U.S. Department of Transportation's (DOT's) Hazardous Materials Emergency Preparedness (HMEP) grant program had been reshaped by the 1986 Emergency Planning and Community Right-to-Know Act of 1986 (SARA Title III) and DOT was working to define the policy and implement the grants.

The first attempt to design Section 180(c) ended in 1993 when DOE management undertook a comprehensive assessment of the OCRWM program that resulted in an OCRWM-wide reorganization. The reorganization moved managers to new areas and led to the creation of the Waste Acceptance, Storage and Transportation (WAST) group. The new managers halted the previous work on Section 180(c) and announced a new approach.

B. Second Attempt 1993 – 1998

Several programmatic changes that had occurred by this time prompted the altered approach to Section 180(c) development. Primarily, the date for waste acceptance at the repository had been delayed until 2010 and the WAST group began development of the Multi-Purpose Canisters for use in shipping the waste.⁴

³ Martin Marietta Energy Systems, Inc. and SAIC, Oak Ridge, Tennessee, *Draft Research Paper to Support the Development of Section 180(c) Policy Options*, December 1991. U.S. Department of Energy, Office of Civilian Radioactive Waste Management, Draft (January 1992) and Final (November 1992) *Strategy for OCRWM to Provide Training Assistance to State, Tribal, and Local Governments*, Washington, D.C.

⁴ *Civilian Radioactive Waste Management Program Plan, Volume 1, Program Overview*, U.S. Department of Energy, December 19, 1994, DOE/RW-0458/Vol.1

Regarding Section 180(c), the new management decided to not follow through with the commitments made in the *Final (November 1992) Strategy for OCRWM to Provide Training Assistance to State, Tribal, and Local Governments*⁵. They dissolved the TCG meetings and decided to pursue stakeholder interactions only through TEC and the cooperative agreement group meetings.

Under the new approach, contractor and OCRWM staff wrote the policy statements and published them for comment in a series of *Federal Register* Notices. The stakeholders were offered the opportunity to comment at the TEC and cooperative agreement group meetings but OCRWM staff were listeners and did not engage in conversation about the policy disagreements.

The lack of engagement created considerable anxiety and frustration in the stakeholders, particularly state emergency managers who felt responsible for implementing a training program in their state that did not correspond to existing training and funding practices between states and the federal government⁵.

Using this process, OCRWM issued five *Federal Register* Notices, each a modification of the prior *Proposed Policy and Procedures for Section 180(c)*:

- January 3, 1995
- July 18, 1995
- May 16, 1996
- July 17, 1997
- April 30, 1998

The highlights of the final Notice, published April 30, 1998, can be summarized as:

- Limited equipment purchases were allowed but the equipment could only be used for training, not for responding to actual emergencies.
- Eligible states and tribes would receive a one-time planning grant up to \$150,000 to assess their needs for safe routine transportation and emergency preparedness.
- Eligible states and tribes would receive an annual base training grant for every year of eligibility.
- Eligible states and tribes would receive a variable grant amount, the first part of which would fund training for inspectors and for emergency responders to reach the awareness level⁶ of training. If funding remained, jurisdictions could train to the technician and specialist levels.
- The amount of the training grant would be determined through a combination of the needs assessment prepared with the planning grant and DOE's funding from Congress.
- "Safe routine transportation" and "technical assistance" were defined.

⁵ *Federal Register*, Vol. 63, No. 83, Thursday, April 30, 1998, p. 23758, U.S. Department of Energy, Office of Civilian Radioactive Waste Management; Safe Routine Transportation and Emergency Response Training; Technical Assistance and Funding, Notice of Revised Proposed Policy and Procedures, Response to Comments.

⁶ US Department of Labor, Occupational Safety and Health Administration. Title 29 Code of Federal Regulations 1910.120, Hazardous Waste Operations and Emergency Response.

- Eligible jurisdictions would receive funding three years prior to the initial shipments. This meant jurisdictions had one year to plan and two years to train along the routes.
- Jurisdictions could use the funds solely for incremental preparations specifically for these shipments, not to build capacity for safe routine transportation or emergency preparedness for other shipments.

None of the five Notices was well received by the stakeholders, although they considered the 1998 Notice's concession to provide a planning grant for conduct of a needs assessment a marginal improvement over earlier Notices. Earlier Notices had DOE determining the funding amounts for eligible jurisdictions. However, DOE had not studied the practicality of implementing the needs assessment which meant it was a concession without a clear operational basis.

Other provisions were viewed as unresponsive to the concerns of those who would eventually be responsible for public safety along the routes. For example, there was no clear plan for how route selection would dovetail with Section 180(c). DOE needed to know routes 5-6 years prior to the commencement of shipments in order to notify jurisdictions of their eligibility for Section 180(c). Unfortunately, no plan existed to integrate the decision-making on route selection and announcement.

By 1999, the OCRWM program suffered additional Congressional budget cuts and work on the transportation program slowed considerably. Work on Section 180(c) was halted and did not actively resume until 2003.

C. Third Attempt 2003 – 2008

The third attempt to design and implement Section 180(c) began in 2003 after Congress approved the Site Recommendation to proceed with Yucca Mountain as the repository. Transportation funding increased and a new management team for transportation (then called the Office of Logistics Management) adopted a more cooperative and consultative approach to program implementation. They based this change on their experience with DOE's Office of Environmental Management, where they had used the consultative model to successfully conduct multiple transportation campaigns.

This effort resulted in a published *Revised Proposed Policy* statement, an unpublished *Draft Application Package* consistent with the policy statement, and a draft implementation plan for the pilot program. The *Draft Application Package* was reviewed and approved by DOE's Office of Procurement and offers a logical starting point for any new effort to implement a Section 180(c) program. The draft pilot program implementation plan, while it would need some updating, also offers a logical starting point to engage spent fuel storage sites and jurisdictions along potential routes in a planning and communications process.

The progress that occurred in this third attempt was largely due to the consultative process described below and the willingness of key OCRWM managers to defend adequate funding for the consultative planning process.

The consultative process began in early 2004 when OCRWM invited interested parties to join a newly formed Section 180(c) Topic Group within the TEC Working Group. The purpose of the Topic Group was to identify critical issues, discuss options for each issue, and help DOE understand the implications of each option. The group hoped to reach consensus on issues, although it was not a requirement. The conversation was dominated by the discussion of options as the members strove to understand each other's positions and adjust their own as their understanding deepened.

Topic group membership was comprised of state officials, and staff from all four state regional groups, two emergency response organizations, two Indian tribes, the trucking and rail industries, and the National Conference of State Legislatures. Two stakeholder groups *not* well represented in the group were unionized emergency responders and Native American tribes. The International Association of Fire Fighters was invited to participate but declined.

To ensure tribal issues were fully addressed OCRWM formed, in 2007, a separate topic group focused on Native American concerns. This group only dealt with the issue of how to allocate funds among eligible tribes and the prevailing view of all parties was that a needs assessment conducted with technical assistance from DOE was the best option. The Tribal Topic Group would have continued its work on more intractable issues if the OCRWM program had not been defunded.

It should be noted that there were objections in some parts of DOE to discussions of Section 180(c) policy or implementation with stakeholders. In response, the OCRWM staff emphasized that DOE was not relinquishing final decision-making authority and the final product would be stronger if issues were identified and resolved early in the planning process. This internal philosophical dispute over the role and legitimacy of stakeholders in the planning process spilled over into the meetings with the stakeholders and had a deleterious effect on the ability of staff to build trust with the stakeholders and engage them in a constructive conversation focused on problem-solving.

The Topic Group meetings were facilitated by one OCRWM and one contractor staff person. A person from DOE's Office of General Counsel also participated regularly in the meetings. The Topic Group identified eleven issues to address regarding Section 180(c) policy. For each issue, the working group collectively wrote a paper that served 1) as the process by which to identify conflicts, analyze options, and record the various positions when agreement could not be reached, 2) as an historical record of the discussion and issue resolution, and 3) as a method to inform higher level management of the analysis behind the policy statements once the documents entered DOE's concurrence and approval process.

After 17 months of negotiation the working group reached a unanimous recommendation on ten of eleven issues. Only the Western Interstate Energy Board withheld support on the method of allocating funding to eligible states. Despite that, the Western Interstate Energy Board did endorse the process OCRWM used to consult the stakeholders and expressed this support in a March 5, 2007 letter to DOE stating "The Section 180(c) Topic Group is an excellent example of the type and quality of work that the topic groups

can accomplish when given the opportunity. We would like to see DOE commit to letting the other topic groups operate with the freedom to fully develop their ideas.”

The team working on Section 180(c) submitted two documents, in late 2005, into the DOE concurrence and approval process – the *Revised Proposed Policy* and the *Draft Application Package*. The team hoped that DOE could finish its review and approval of the documents by the first quarter of 2006 because of the staff’s efforts to keep management informed and to maintain the transparency of the issues as captured in the issue papers.

The schedule derailed quickly when it became apparent that not all DOE elements agreed on the implementation approach. One issue raised was whether to alter the funding allocation formula. The Section 180(c) team finally dissuaded any reviewers from changing the formula, explaining that the proposed changes would undermine the consultative process and would not apportion funds by either risk or need. Another issue that was raised was whether the Section 180(c) program was progressing too rapidly. This view held that Section 180(c) was not mission-critical and its implementation should be delayed until the repository license was granted. This dispute engendered considerable internal argument, and delayed issuance of the policy by more than a year. Eventually, a modified approach was agreed upon, and OCRWM determined to:

- 1) withdraw the *Draft Application Package*;
- 2) remove five policy statements from the *Revised Proposed Policy*; and
- 3) move the merit review criteria from the *Draft Application Package* (the review criteria were developed cooperatively by a subset of the Topic Group and were to serve as the grant evaluation criteria) to the *Revised Proposed Policy*.

The five withdrawn policy statements were regarding:

- Using WIPP as a model: OCRWM management had been willing to commit to fund similar transportation safety protocols that are in place for WIPP shipments.
- Codifying Section 180(c) policy: OCRWM had been willing to promulgate a rule to implement the policy and possibly the grant application, consistent with other federal agency practices.
- Developing a contingency plan: OCRWM had been willing to accept the contingency re-routing procedures developed in negotiations with the Topic Group.
- Continuing funding during shipment lapses: OCRWM had been willing to agree that funding should not cease during shipment lapses of less than four years through a jurisdiction in order to preserve the knowledge and skills of the trained public safety officials.
- Addressing operational expenses: OCRWM had been willing to acknowledge (but not take a position on) state and tribal expectations of full reimbursement for costs incurred because of spent nuclear fuel shipments.

Each of these points had precedents in related DOE and federal government grant programs; however, ongoing disagreements about timing and implementation, some of which occurred in public, needed to be resolved to move the project forward.

In 2006, during the ongoing internal debate, the National Academies Committee on the Transportation of Radioactive Waste issued their report on *Going the Distance*,⁷ their study and analysis of spent nuclear fuel and high-level radioactive waste transportation in the United States. The following text box captures their findings and recommendations with regard to Section 180(c) and emergency preparedness along potential routes.

Going the Distance

FINDING: Emergency responder preparedness is an essential element of safe and effective programs for transporting spent fuel and high-level waste. Emergency responder preparedness has so far received limited attention from DOE, states, and tribes for the planned transportation program to the federal repository. DOE has the opportunity to be innovative in carrying out its responsibilities for emergency responder preparedness. Emergency responders are among the most trusted members of their communities. Well-trained responders can become important emissaries for DOE's transportation program in local communities and can enhance community preparedness to respond to other kinds of emergencies.

RECOMMENDATION: DOE should begin immediately to execute its emergency responder preparedness responsibilities defined in Section 180(c) of the Nuclear Waste Policy Act. In carrying out these responsibilities, DOE should proceed to (1) establish a cadre of professionals from the emergency responder community who have training and comprehension of emergency response to spent fuel and high-level waste transportation accidents and incidents; (2) work with the Department of Homeland Security to provide consolidated "all hazards" training materials and programs for first responders that build on the existing national emergency response platform; (3) include trained emergency responders on the escort teams that accompany spent fuel and high-level waste shipments; and (4) use emergency responder preparedness programs as an outreach mechanism to communicate broadly about plans and programs for transporting spent fuel and high-level waste to a federal repository with communities along planned shipping routes.

Although the committee's recommendations were similar to the recommendations of the Section 180(c) Topic Group and to the views of OCRWM's Section 180(c) staff, the report had minimal impact on the interoffice discussion and the final form of the *Revised Proposed Policy*. Too many DOE personnel with sign-off authority did not agree with the findings or the recommendations and would not modify their view of the Section 180(c) documents.

OCRWM published the *Revised Proposed Policy* in the *Federal Register* in July 2007; a full twenty-one months after the Topic Group finished its work. Then in October, 2008, OCRWM reissued the *Revised Proposed Policy*, adding a section on the distribution of funds to eligible tribes. This publication had a shorter review and approval process because the tribes agreed with OCRWM's position and the remainder of the Notice simply reissued the 1997 Policy. Key points of the policy are summarized in Table 2-1.

⁷ National Research Council of the National Academies, Nuclear and Radiation Studies Board, Transportation Research Board, Committee on Transportation of Radioactive Waste, *Going the Distance? The Safe Transport of Spent Nuclear Fuel and High-Level Radioactive Waste in the United States*, The National Academies Press, 2006, pp. 247-8.

Table 2-1

DOE POLICY STATEMENT ON SECTION 180(C)⁸

Issue Definition	Topic Group's Position	OCRWM's Position in 2008	Correlation to WIPP
<p><i>Allowable Activities:</i> Which activities will grant recipients be allowed to access using Section 180(c) funds?</p>	<p>They agreed, for the most part, with OCRWM's final policy position. Their position was that Section 180(c) should pay for training medical staff, reimbursing staff costs for time spent preparing for OCRWM shipments, and purchasing equipment. These activities had been prohibited or limited in prior policy statements.</p>	<p>The policy allows a broad array of planning and training activities to be covered by Section 180(c) funds thus providing recipients flexibility to direct funds towards their individual needs. Activities must be consistent with DOE procurement regulations, described in their grant application, and approved by DOE. Allowable activities include paying for staff time, training emergency medical officials, and purchasing equipment.</p>	<p>The 2008 OCRWM policy is now consistent with WIPP's practices.</p>
<p><i>Training Levels:</i> Who will be trained, to what level, and with what curriculum using Section 180(c) funds?</p> <p>Training must cover:</p> <ul style="list-style-type: none"> ➤ Inspections and other safe routine transportation activities for rail, truck, and barge. ➤ Hazardous materials emergency preparedness. ➤ For state, tribal, and local public safety officials. <p>Training levels are influenced by the applicability of national training standards and the public safety officials eligible for training.</p>	<p>They largely agreed with OCRWM's final policy position.</p> <p>Their position was that DOE should let the recipients of the grant decide who should be trained along the shipping routes, to what level, and with what curriculum.</p>	<p>Training with Section 180(c) funds should be to the level of detail and to the degree necessary to prepare for shipments to an NWPAs-authorized facility. When necessary or appropriate, training should be consistent with the Occupational Safety and Health Administration (OSHA) awareness or operations levels, as those terms are defined in 29 CFR 1910.120, and the jurisdiction's emergency response plan. Any deficiency in basic emergency response capability may be addressed through consultation and technical assistance.</p>	<p>The 2008 OCRWM policy is now consistent with WIPP's practices.</p>

⁸ U.S. Department of Energy, Notice of Revised Proposed Policy and Request for Comments, *Federal Register*, Vol. 73, No. 212, October 31, 2008.

Issue Definition	Topic Group's Position	OCRWM's Position in 2008	Correlation to WIPP
Emergency response systems vary significantly from state to state.			
<i>Contingency Rerouting:</i> In case a shipment is interrupted en route because of unforeseen events and needs rerouting to a less prepared or unprepared route how best should DOE administer Section 180(c) assistance?	<p>In the event of unforeseen circumstances, DOE should make funds available, if necessary, and consult with the affected state, local and tribal governments as necessary to reach a mutually acceptable solution.</p> <p>Further contingency re-routing should be considered as part of a comprehensive transportation plan, rather than limiting the discussion to Section 180(c) concerns.</p>	DOE did not mention contingency re-routing in the 1998 <i>Federal Register</i> Notice of Revised Proposed Policy.	The WIPP Transportation Safety Program Implementation Guide describes re-routing procedures in great depth.
<i>Definitions:</i> The 1998 Federal Register Notice defined “safe routine transportation” and “technical assistance”.	The Topic Group requested minor adjustments to the definitions of “safe routine transportation” and “technical assistance.” They requested that DOE add the definition of “public safety official” because they were concerned that DOE, as it had in its 1998 Notice, would did not allow training for emergency medical personnel.	<p>DOE dropped its previous definitions of definitions “safe routine transportation” and “technical assistance”. DOE did not include a definition of “public safety official” although DOE did reverse its 1998 language and make emergency medical personnel eligible for training.</p> <p>Several activities that states requested be allowed under “Safe routine” were included as allowable activities under the planning grant. Examples are: development of mutual aid agreements, conduct of route-specific needs assessments, interstate planning and coordination.</p>	WIPP did not define terms because they developed their training and funding program jointly with the states. WIPP does train emergency medical personnel along the routes. The language in the WIPP Land Withdrawal Act is not as specific as Section 180(c) and did not raise concerns about definition of terms.
<i>Funding Allocation:</i> Should grants be allocated according to a formula, based upon jurisdictions’ assessment of their needs, or a combination of formula and needs assessment. The challenge was in selecting an allocation method that balanced the competing interests of recipient need, risk, equity, and	<p>DOE should provide a one-time planning grant of \$200,000 per corridor state.</p> <p>For the annual training grants, the Topic Group was unable to reach a consensus.</p> <p>The Midwestern, Northeastern, and Southern states recommended that DOE adopt the HMEP-based proposal. They felt this approach accounted for risk and needs and</p>	<p>DOE agreed to provide up to a \$200,000 one-time planning grant for both states and tribes.</p> <p>DOE agreed to provide an annual base training grant of no more than \$100,000.</p> <p>DOE agreed to use the formula recommended by the Topic Group to allocate a variable training grant for funds remaining after the planning and base grants are disbursed.</p>	WIPP allocated funds by working with the state regional group staff and state officials. They used neither a formula nor a specific needs assessment process.

Issue Definition	Topic Group's Position	OCRWM's Position in 2008	Correlation to WIPP
<p>program efficiency.</p>	<p>was similar to existing successful hazardous materials grants, particularly DOT's HMEP. The formula is as follows:</p> <ul style="list-style-type: none"> 0.3 (% of Population along Route Corridors) + 0.3 (% of Route Miles) + 0.3 (% of Number of Shipments) + 0.1 (% of Shipping Sites) <p>The Western states wanted more specificity to the transportation system to allow states to evaluate impacts within their borders. Costs could then be aggregated to identify the approximate overall cost nationally. Then they could determine what, if any, formula would adequately meet states' needs, or if a direct needs-based approach would be needed.</p> <p>The tribal Topic Group recommended that DOE assist tribal governments in conducting a needs assessment and basing their funding request upon that.</p>	<p>For tribes, DOE agreed to provide technical assistance and funding to assist a needs assessment. Then DOE would allocate funds to each eligible tribe based on the needs assessment. DOE did not use a formula to allocate funds to tribes because, with few exceptions, they do not have sufficient route miles or population along corridors to make the formula work.</p>	
<p><i>Funding Distribution:</i> OCRWM could distribute funds through either grants or cooperative agreements. The funds could flow directly to states or to state regional organizations. Despite the language in Section 180(c), no one disputed that funds should flow directly to tribal governments.</p>	<p>The Topic Group's recommendations were adopted by DOE with few changes. The recommendations were:</p> <ul style="list-style-type: none"> ➤ Provide funding through direct grants to states and tribes. ➤ Let the state agencies, working through their governors' offices, designate which state agency should administer the funding. ➤ DOE send a letter to the governor's office notifying them of their state's eligibility for funds and mention in the letter the name and agency of the staff person from the state involved in helping DOE develop the Section 180(c) program. A copy of the letter should also be sent to the above mentioned staff person. 	<p>DOE will implement Section 180(c) by funding direct grants to eligible states and tribes.</p>	<p>WIPP provides funding through their cooperative agreements with the state regional groups to pass through to state governments. WIPP funds tribal governments directly. WIPP has a reputation for working closely with state officials to address the concerns expressed by the Section 180(c) Topic</p>

Issue Definition	Topic Group's Position	OCRWM's Position in 2008	Correlation to WIPP
	<ul style="list-style-type: none"> ➤ Acknowledge the role of the State Regional Groups in coordinating intra-regional planning and training. 		Group's recommendations.
<p><i>Pass-through of Funds:</i> Should states pass-through a percentage of funds to local governments? Some states have a minimal role for local responders in a hazmat accident and want to keep funds for their state and regional responders. Local governments fear that unless a pass-through is required, they will not benefit from Section 180(c) assistance.</p>	DOE should not require a pass-through of funds but recipients should demonstrate in the application package and reporting requirements how Section 180(c) assistance will be used to meet the goals of the program.	DOE does not require a pass-through. However, the merit review criteria, developed in cooperation with a subset of the Topic Group, require applicants to demonstrate how local public safety officials will benefit from the assistance.	WIPP passes funds to states through their respective state regional groups. The states then are expected to use the funds to offset local gov't costs. WIPP staff keeps tabs on the funds to ensure states use the funds appropriately. This requires an open and on-going conversation with all parties.
<p><i>State Fees:</i> Should states and tribes that assess fees on spent fuel shipments have their Section 180(c) funding docked? If not, states with fees then have two funding sources for the same activities.</p>	DOE should not deduct the cost of state fees from a state's Section 180(c) award unless separately negotiated with the state.	DOE has not made a statement regarding possible deductions from Section 180(c) to balance out the fees paid to ship through a jurisdiction.	The states propose an annual budget to the state regional group who then negotiate funding with WIPP officials. There is no guarantee to offset all operational costs.
<p><i>Timing and Eligibility:</i> The primary questions are: (1) how many years prior to a shipment should a state or tribe receive assistance: and (2) whether a jurisdiction which might respond to an emergency on a route outside its jurisdiction (through mutual aid or other legal agreement) be eligible for funds.</p>	<p>This recommendation is abbreviated:</p> <ul style="list-style-type: none"> ➤ Begin eligibility no less than three years prior to shipments through a jurisdiction. ➤ Continue eligibility as long as shipments travel within or through the jurisdiction. ➤ Where a route constitutes a border between two jurisdictions each jurisdiction with authority over the route should be eligible for assistance. ➤ If a state or tribe will <i>not</i> have shipments but has cross-deputization or mutual aid agreements with a jurisdiction that <i>will</i> have shipments, the former may work with DOE to receive funding. 	<p>DOE will notify the governor's office of their eligibility for Section 180(c) five years prior to initial shipments planned through their jurisdiction. Planning grants will be available four years prior to the first planned shipment and training grants will be available three years prior to the first planned shipment through a jurisdiction.</p> <p>A jurisdiction that has a mutual aid or cross-deputization agreement with a jurisdiction that will have shipments, the non-shipment jurisdiction may work with DOE to receive funding.</p> <p>Applicants must submit a five-year projection and 2-year</p>	<p>WIPP was more open-ended in their commitment agreeing to fund the state regional groups and conduct training well before shipments commenced and continuing as long as needed.</p> <p>WIPP has an advantage because they control their waste acceptance schedule. They can prepare cross-</p>

Issue Definition	Topic Group's Position	OCRWM's Position in 2008	Correlation to WIPP
	<p>The Topic Group recommends the following timing:</p> <ul style="list-style-type: none"> ➤ 5 years prior to scheduled shipment: Letter to governors announcing anticipated routes, and therefore, eligibility. ➤ 4 years prior: Planning grants issued. Funds may be carried over past initial 12-month grant period. ➤ 3 years prior: Training grants issued each year prior to first scheduled shipment. This timing is optional. States and tribes are not required to start training and planning this soon. ➤ If shipments through a jurisdiction stop for 4 or more years, then jurisdictions lose eligibility until shipments are scheduled to occur within 3 years. In this case, jurisdictions could apply for another planning grant. ➤ The Topic Group recommends that DOE require in the application a 5-year projection/2 year work plan. 	<p>work plan as part of their application.</p> <p>If shipments through a jurisdiction stop for 4 or more years, then jurisdictions lose eligibility until shipments are scheduled to occur within 3 years. In this case, jurisdictions could apply for another planning grant.</p>	<p>country route, complete shipments along that route, then move to another route in another part of the country. In contrast, OCRWM's waste acceptance schedule could have one shipment through a series of states, then not have another shipment along that route for five years.</p>
<p><i>Rulemaking:</i> Should DOE issue Section 180(c) as a policy announcement or conduct a rulemaking that prevents future administrations from changing the policy at will.</p>	<p>Issue a policy, then promulgate a rule for implementation of the policy and grant application. Include key elements of the Section 180(c) program, to include as a minimum all the issues identified by this Topic Group. The allocation formula should not be codified, so it can more easily be modified later if needed.</p>	<p>DOE did not address whether it would issue a rulemaking. Transportation staff and managers had indicated their willingness to do so in several public forums.</p>	<p>WIPP worked with the WGA and the resulting protocols were captured in the Land Withdrawal Act. The policies are renewed with each new administration by new MOU's between governors and Sec. of Energy</p>
<p><i>Non-180(c) Activities:</i> Should DOE pay for all planning, operational, and emergency response costs incurred by jurisdictions that were caused by shipments to an NWPA-authorized facility?</p>	<p>DOE should commit to funding the same kind of transportation safety program that they support for WIPP shipments, to include the operational activities.</p> <p>OCRWM should work in conjunction with the Office of Environmental Management in order to take full advantage of DOE's existing transportation infrastructure.</p>	<p>OCRWM did not comment on whether they would cover all costs incurred by states and tribes as a result of these shipments nor did they commit to taking advantage of DOE existing transportation infrastructure.</p>	<p>WIPP's cooperative approach was the model for the Topic Group's recommendation.</p>

The reaction to the published proposed policy was mixed. Many stakeholders viewed the process of consultation and negotiation as a model of cooperative planning⁹. Some participants wondered whether the almost two year delay before publication indicated that OCRWM was not serious about a WIPP style cooperative planning process.¹⁰ Several Topic Group participants wrote comments expressing dismay that DOE had cut key policy statements¹¹. Without knowing the reasons for the cuts, they wondered whether DOE was acting in good faith.

In parallel with and partly because of the Topic Group's work, the four regional state groups negotiated among themselves and transmitted to DOE a joint "Principles of Agreement" regarding transportation of spent nuclear fuel and high-level waste. The state officials first discussed the principles in late 2004 in Washington, DC at the Topic Group's first in-person meeting. This was the first comprehensive joint statement from the state regional groups on OCRWM's transportation program. Several of the Principles of Agreement were included, in modified form, in the Section 180(c) Topic Group's recommendations.

Also working in parallel to the Section 180(c) Topic Group were other TEC topic groups which focused on route selection and operational practices. However, these efforts were not well integrated. For example Section 180(c) policy states that DOE will notify states and tribes of their eligibility five years prior to the first shipments. To make this notification, DOE needed to know how many shipments were going to travel over specific routes six years prior to shipments commencing. This information was essential in order to notify states and tribes of their eligibility and to enter the data required to calculate the funding formula. Unfortunately, work in the topic groups progressed without linkages between them or the recommendations they were making. The lack of integration resulted from multiple causes including the lack of agreement about process and how to proceed. For example, in the routing topic group some regions agreed to develop their own regional route options while others refused. In other topic groups, there were staff changes and funding limitations. Although some staff and managers were beginning to raise a red flag on the lack of integration, the problem was never resolved. In fact, the idea for a Section 180(c) pilot program was suggested partially in response to this problem.

In summary, the lessons gained from this and previous attempts fall into three categories: process, policy, and institutional capacity. The discussion below is not meant to be exhaustive but summarizes key points to help guide future transportation planning efforts.

What worked well:

- Process: Stakeholders were actively involved in identifying the issues that concerned them and writing the issue papers. They saw their contribution

⁹ Joint letter from four State Regional Groups to the U.S. Department of Energy, March 5, 2007.

¹⁰ Letter from the Council of State Governments Midwest, Midwestern Radioactive Materials Transportation Project to the U.S. Department of Energy, January 24, 2007.

¹¹ Western Interstate Energy Board, High-Level Waste Committee, Comments on OCRWM's Section 180(c) Revised Proposed Policy and Procedures for Implementing Section 180(c), January 17, 2008.

- reflected in the papers. They could follow the progress of their ideas through DOE's decision-making, at least until the documents entered DOE's concurrence and approval process.
- Process: The Topic Group participants felt like partners in the program's development and they became vested in its success. Individual positions often changed or adapted once they understood the operational, legal, or practical implications of their positions. This commitment to progress led the Topic Group to view itself as a team rather than separate organizations fighting for their piece of the pie.
 - Process: Management provided sufficient time for the Topic Group to complete its work.
 - Institutional Capacity: The DOE team involved in the Topic Group work had the commitment, experience, and qualifications to lead the process. They could work with multiple competing interests, build trust with diverse stakeholder populations, handle emotionally-charged situations, and delve effectively into the operational details.
 - Institutional Capacity: The DOE team working with the Topic Group was willing to push back and give substantiated reasons why certain Topic Group recommendations would not work and would not be acceptable to DOE.
 - Institutional Capacity: The management of the Office of Logistics Management was philosophically aligned with the consultative approach and supported the staff conducting the negotiations.
 - Policy: Both management and staff drew clear lines of responsibility during the negotiations, reminding Topic Group members that DOE had final decision-making authority and encouraging them to buttress their recommendations with supporting data and information.

What did not work as well:

- Process: Before 2007, some in the management layers above or equal to the Office of Logistics Management and in other Departmental offices with a key role in policy development had a philosophy inconsistent with the consultative approach. They viewed stakeholder input as non-binding (which it technically was) and unhelpful. This meant all the consultations were at risk of being discarded in favor of internal DOE decisions. This undermined the ability of staff to work with their state and tribal counterparts and created mistrust between stakeholders and DOE. When Ward Sproat was confirmed as the OCRWM director in 2007, his philosophy was clearly supportive of the consultative approach, but institutional changes take time and the fractured opinions towards the role of stakeholders continued to delay decisions and inhibit progress.
- Policy: The wording of Section 180(c) created unnecessary hurdles. The specificity with "safe routine transportation", "emergency response procedures", "... to states for public safety officials of local governments and Indian tribes", all led to piecemeal solutions as DOE struggled to address each phrase. This caused more work, created more opportunity for division, and separated the effort to implement Section 180(c) from other operational planning activities.

- **Institutional Capacity:** Planning for transportation was not well integrated across the transportation program. Whether it was Section 180(c), routing, operational practices, waste acceptance, cask acquisition, or Nevada Rail, staff worked without sufficient integration to understand the linkages among the elements. The need to integrate stakeholder relations with technical operations, and to have management emphasize and support this integration, is echoed in the findings of the Office of Logistics Management’s *Radioactive Waste Logistics Benchmarking Report*¹² from May, 2007. In too many cases, elements of the transportation program were separately managed and staffed, which decreased linkages and increased frustration for stakeholders. Many stakeholders worked on multiple topic groups and were acutely aware of the lack of integrated planning.

Discussions around money and its distribution easily inflame passions. The third attempt to implement Section 180(c) offers an example of effective cooperation between the federal government and other levels of government over the distribution of funds for a controversial purpose. The program could have been built in a shorter time frame given steady support from OCRWM management and a consistent philosophical approach to policy development. Instead the program languished for 20 years as management alternated from a more inclusive, consultative approach to a non-consultative internal decision-making model. Only in later years were there consistent efforts to implement the statute and even then progress was hindered by differing views within DOE about the value of the consultative process.

While OCRWM stutter-stepped in its efforts to implement Section 180(c), other parts of DOE and the federal government made progress building programs to fund and train local, state, and tribal responders for hazardous materials transportation, in part because those shipments were actually occurring.

III. Other Federal and International Examples

Other federal programs have similar statutory requirements and similar implementation challenges as OCRWM had with Section 180(c). These programs, and the route preparation work conducted by AREVA NP in France, offer lessons for the development and operation of Section 180(c).

Since the tragedy on 9/11, the United States has redesigned its emergency management system, requiring much more integration and consistent standards across jurisdictional levels. Any emergency management training, funding for training or technical assistance that DOE offers will need to meet these new standards and requirements.

Although this section focuses primarily on emergency management, Section 180(c) calls for training in procedures for “safe routine transportation” as well as “emergency

¹² U.S. Department of Energy, Office of Civilian Radioactive Waste Management, Office of Logistics Management, *Radioactive Waste Logistics Benchmarking: Project Status Report, Interim Findings*, May 2007, p. 32.

response procedures”. As mentioned in the Section I of this paper, the states and DOE have a common understanding that training for “safe routine transportation” means training to conduct inspections for shipments and some amount of cost recovery for the activities listed on page 12 of this paper.

A. Transportation Emergency Preparedness Program

The Transportation Emergency Preparedness Program (TEPP) is a national program managed by DOE’s Office of Environmental Management at a headquarters level and implemented through DOE’s eight regional offices. The TEPP mission is to ensure that Federal, State, Tribal, and local responders have access to the plans, training, and technical assistance necessary to safely, efficiently, and effectively respond to transportation accidents involving DOE-owned radioactive materials. To support this mission TEPP has formed strong partnerships over the last fifteen years with State, Tribal and local response organizations, Federal agencies and other national programs integrating TEPP planning tools and training into a variety of hazardous materials preparedness programs.

These partnerships have resulted in States and Tribal Nations using significant portions of the TEPP resources in their programs and/or adopting the Modular Emergency Response Radiological Transportation Training¹³ (MERRTT) program into their hazardous material training curriculums to prepare their fire departments, law enforcement organizations, hazardous materials response teams, emergency management officials, public information officers and emergency medical technicians for responding to transportation incidents involving DOE (and a variety of other shippers) radioactive materials.

TEPP also offers 24-hour points of contact at each DOE Regional Office that state, tribal, and local public safety officials may access in case of an incident or accident involving radioactive materials. These 24-hour points of contact are often on the National Nuclear Security Administration’s Radiological Assistance Program (RAP) teams as well, which leverages the coordination between DOE’s programs and their resources.

In addition to partnerships with states and tribal nations, TEPP coordinates their training with WIPP’s State and Tribal Education Program (STEP) program. This partnership provides TEPP resources, technical assistance, and MERRTT courses along WIPP shipping corridors.

The TEPP program has no single statutory authority. Instead, TEPP is a component of the overall comprehensive emergency management system established by DOE Order 151.1, Comprehensive Emergency Management System. DOE’s emergency planning is consistent with the National Incident Management System, the National Response Plan and the bevy of other current federal emergency response programs and regulations that set forth requirements for federal, state, local, and tribal emergency planning activities. This includes DOE Orders, guides, and manuals specify planning activities (including

¹³ <http://www.em.doe.gov/TEPPPages/teptraining.aspx>.

emergency planning) for the DOE shipper and other parties involved with shipping activities.

The relevance of TEPP as a player in the implementation of Section 180(c) became clearly evident through the late 1990s and early 2000s. As Section 180(c) implementation faltered and TEPP became more institutionalized and familiar to state and local officials, it was clear that most Section 180(c) recipients would use their funds to obtain training from the TEPP program. This would require that OCRWM provide funding to EM to ensure TEPP's ability to meet the increased demand through hiring additional trainers, altering curricula to include OCRWM-specific shipment information, and conducting additional exercises, although spent fuel shipments are part of the existing TEPP material. Because of this close relationship, the TEPP program would likely have become the training and technical assistance arm of Section 180(c) had the OCRWM program progressed, and would be a logical candidate for this function in a reconstituted program.

B. State and Tribal Education Program

When the WIPP program commenced in the late 1980s, the U.S. Department of Transportation funded the Western Governors' Association (WGA) to conduct an assessment of training and activities necessary to prepare the routes for shipments of transuranic waste. This resulted in a 1989 *Report to Congress*¹⁴ describing the needs of the western states in three critical areas: accident prevention, emergency preparedness, and public involvement and information. The Secretary of DOE agreed with the conclusions in the 1989 *Report to Congress* and directed DOE to enter into a five-year Cooperative Agreement with the WGA.

Through the cooperative agreement, the WGA updated the findings of the *Report to Congress* in 1991 and added medical preparedness and highway routing as additional areas to be addressed. The WGA then wrote the *Waste Isolation Pilot Plant Transportation Safety Program Implementation Guide* detailing the agreed upon protocols and procedures for WIPP transportation for use as the handbook for states to prepare for WIPP shipments. WIPP implements the agreements in the WIPP Transportation Plan and, in addition, a Memorandum of Understanding between WGA and the Department of Energy codifies all this. The language of the WIPP Land Withdrawal Act, passed in 1992, captured the existing agreements and activities in Section 16 on Transportation (See Attachment A).

The program has changed over the years as DOE worked to streamline its offerings through STEP and TEPP and make them consistent with the changing national emergency response system developed in response to the 9/11 terrorist attacks. Classes now available through STEP are Command and Control, Incident Command System, Train-the-Trainer, Medical Management and any of MERRTT's 21 modules. Consistent

¹⁴ Memorandum of Agreement Between the Western States and U.S. Department of Energy, Regional Protocol for the Safe Transport of Transuranic Waste to the WIPP, U.S. Department of Energy, Washington, DC, December 1995, p. 1.

with the requirement in the WIPP Land Withdrawal Act, the STEP and MERRTT courses have been reviewed and signed off on by the Department of Labor's Occupational Safety and Health Administration. In addition, the MERRTT courses have been approved by the U.S. Department of Homeland Security (DHS) and are listed along with other federal courses available for States who need to train for shipments of radioactive material regardless of their source. DHS cross-references the courses on their training website. The partnership among federal agencies has mirrored the partnership between the DOE and states in that the training is offered consistent with state budget timeframes and training priorities.

Emergency responders along the route became highly familiar with WIPP, the casks, and the emergency response resources available to them because of WIPP's willingness to work in partnership with the states and to provide local officials with training. Those public safety officials then became the spokespeople to the local media, reassuring their neighbors that shipments were safe and that local public safety officials were prepared for any eventuality.

When shipments began in 1999 a few protesters held rallies at points of origin or along the routes. However, the extensive work WIPP had done along the route and the cooperative nature of the interactions meant there was little media or public concern. WIPP effectively inoculated itself from public perceptions of fear by being an open and trust-worthy partner.

The coordination between STEP and Section 180(c) would be minimal. Each program has to focus their resources on their respective shipments. The lessons that can be drawn from WIPP's experience with STEP are:

- the consultative approach can lead to a highly successful transportation program and,
- sufficient training and public information can ameliorate people's fears about shipments of nuclear material.

C. Radiological Assistance Program

The National Nuclear Security Administration sponsors the Radiological Assistance Program (RAP). The mission of RAP is to provide first response radiological assistance to protect the health and safety of the general public and the environment. They assist federal, state, tribal, and local agencies in the detection, identification, analysis, and response to events involving the release of radiological materials in the environment¹⁵.

Additionally, RAP provides emergency response training assistance to federal, state,

¹⁵ In addition to RAP teams, NNSA can supply the following assets in a radiological emergency: Aerial Measuring System, Atmospheric Release Advisory Capability, Accident Response Group, Federal Radiological Monitoring and Assessment Center, Nuclear Emergency Support Team, Radiation Emergency Assistance Center/Training Site.

<http://www.nv.doe.gov/library/factsheets/rap.pdf>

tribal, and local agencies through the Weapons of Mass Destruction First Responder Training Program. RAP coordinates and conducts outreach activities with other federal agencies and state, local, and tribal governments to the degree practicable, including initial interface with these entities for joint participation in drills, exercises, and support for domestic preparedness.

RAP does not fund first responders but rather offers training prior to an incident that involves radioactive materials. It also offers technical assistance and measuring and monitoring resources during an incident.

RAP's relevance to OCRWM has more to do with operational coordination and readiness and less to do with policy development or stakeholder processes. RAP teams located at each of DOE's eight regional offices would likely participate in training and exercises conducted in preparation for OCRWM shipments. The RAP teams will need notification prior to OCRWM shipments so they are prepared if called upon in an accident. Public safety personnel want familiarity with how to contact RAP and the resources they offer in case of an incident.

RAP does not have a mandate to work with stakeholders since it derives from the national security side of DOE. However, it has a positive record of conducting training and managing good relations with the state, tribal, and local officials that interact with the program.

D. HMEP

The Hazardous Materials Transportation Safety and Security Reauthorization Act of 2005 authorizes the U.S. DOT to provide assistance to public sector employees through training and planning grants to States, Territories, and Native American tribes for emergency response. The purpose of this grant program is to increase State, Territorial, Tribal, and local effectiveness in safely and efficiently handling hazardous materials accidents and incidents, enhance implementation of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), and encourage a comprehensive approach to emergency training and planning by incorporating the unique challenges of responses to transportation situations.

The HMEP Grant Program distributes fees collected from shippers and carriers of hazardous materials to emergency responders for hazmat training and to Local Emergency Planning Committees (LEPCs) for hazmat planning.

HMEP became a model for Section 180(c) implementation because of the similarities between the programs and DOT's considerable success in designing and implementing their program. First, DOT officials engaged the state and tribal officials consulting them about how to structure the program. The final grant applications and training curriculum reflected their input. Second, HMEP offers both planning and training grants, an approach which OCRWM adopted because of its inherent common sense. Third,

HMEP's formula for allocating funds has a long track record of quantitatively balancing need and risk in a manner regarded as fair by the recipients.

Despite their similarities, there will be little coordination between the programs once Section 180(c) becomes operational. First of all, HMEP does not focus on radioactive materials. Their focus is more common hazardous materials such as gasoline and industrial chemicals. Second, HMEP provides assistance to any state, tribe, or territory that qualifies whereas Section 180(c) eligibility is restricted to the routes along which shipments to an NWPA-authorized facility are planned. Third, the draft grant application (never published but still usable) OCRWM wrote in 2005 requires grant applicants to eliminate duplicative activities by coordinating their Section 180(c) funds with other assistance programs.

E. DHS and FEMA

The nation's current emergency management system was established by the Federal Emergency Management Agency, within the Department of Homeland Security, after the 9/11 terror attacks. The Section 180(c) program and any emergency preparedness training funds must be consistent with this system. The system is described in the *National Response Framework* (NRF), a guide that details how the nation conducts all-hazards response— from the smallest incident to the largest catastrophe. The NRF establishes a comprehensive, national, all-hazards approach to domestic incident response. The Framework identifies the key response principles, as well as the roles and structures that organize national response. It describes how communities, states, the federal government and private-sector and nongovernmental partners apply these principles for a coordinated, effective national response. In addition, it describes special circumstances where the federal government exercises a larger role, including incidents where federal interests are involved and catastrophic incidents where a state would require significant support. It lays the groundwork for first responders, decision-makers and supporting entities to provide a unified national response.

The National Incident Management System (NIMS) works hand in hand with the NRF. The NIMS provides the template for the management of incidents, while the NRF provides the structure and mechanisms for national-level policy for incident management. The NIMS guides departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.

In addition, FEMA is responsible for training emergency responders around nuclear power plants. The Radiological Emergency Preparedness Program (REP) encompass only “offsite” activities, that is, state, tribal and local government emergency planning and preparedness activities that take place beyond the nuclear power plant boundaries. Onsite activities continue to be the responsibility of the Nuclear Regulatory Commission.

In this capacity, FEMA conducts training and exercises in conjunction with state, tribal, and local governments to prepare for an accident or incident involving radioactive material.

There is limited overlap between FEMA's work and Section 180(c). The REP program focuses on reactor safety issues and does not address how to respond to an accident or incident involving the transportation of spent fuel.

F. Transporting in France

Lessons from Europe apply to Section 180(c) in a limited fashion because of the different governmental systems and, in the case of France, different public attitudes. States in this country have much more authority for public health and safety than do their corresponding jurisdictions in France. In addition, the U.S. public is much less cohesive in their views towards nuclear power and the relative risks of related activities such as the shipment of spent nuclear fuel than is the French public¹⁶.

The French government is responsible for preparing the prefectures (similar to counties) along the route for shipments. This includes complying with IAEA's *Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material: Safety Guide*.

Because of the number of annual shipments within France and the general public acceptance of nuclear power, there is less need to conduct the extensive public information campaign that WIPP and other DOE shipment programs felt was necessary. However, along with emergency management training and notifications, the French government does provide information to the general public prior to shipments. In addition, TN International, AREVA's transportation division, has extensive public information resources and conducts public outreach activities throughout the country. AREVA NC personnel have stated that they recognize any accidents or problems with shipments within France could negatively impact the public perception of nuclear power activities around the world.¹⁷

IV. Conclusions and Options

This paper analyzes the history of Section 180(c), the competing and varying management philosophies that impacted program development, and the national emergency management system within which a Section 180(c) program will need to operate. This section discusses the conclusions drawn from that analysis and options for next steps to achieve an operational Section 180(c) program.

¹⁶ U.S. Department of Energy, Office of Civilian Radioactive Waste Management, *Benchmarking Project, Report from AREVA NC Site Visit and Interview*, Spring 2007, March 2008, p.16.

¹⁷Ibid. p. 17

The conclusions from this analysis are as follows:

1. Implementation of Section 180(c) was delayed¹⁸ because of various and sometimes conflicting positions within OCRWM and between OCRWM and other parts of DOE. The primary viewpoints favoring slower implementation were:
 - The Section 180(c) program had a minimal role within the transportation system because it was simply a statutory requirement that needed to be met. Therefore implementation of Section 180(c) was not needed until three or four years prior to shipments.
 - The Section 180(c) program, and the entire transportation system, had a minimal role within the larger repository program. Therefore transportation tended to be underfunded through the budget crunches of the 1990s and could not make progress.
 - By the mid-2000's the Section 180(c) program and the entire transportation program were seen as too far ahead of the rest of the repository program. Therefore, work on Section 180(c) and the transportation program should be delayed until the repository was further along.
 - The states and tribes along the routes were not essential, or even helpful in some cases, to designing and implementing a program meant to prepare them for NWPA-related shipments.
2. It is of utmost importance that management state the goals and the philosophy of the organization clearly, enforce those expectations across the organization, and support the staff's efforts to pursue those goals.
3. Other DOE programs that ship radioactive materials and the findings of the *Going the Distance* study learned that transportation planning and emergency preparedness must occupy an early and equal position to the siting work, despite the conflicting viewpoints summarized above in point 1.
4. A successful Section 180(c) program requires a strong partnership between DOE and state and tribal officials along the routes. This means that all policy and operational decisions must be:
 - well-integrated with existing practices at the state and tribal level, and
 - consistent with, although not identical to, DOE's prior successful transportation campaign practices.
5. State and tribal positions or viewpoints were not as intractable or unreasonable as often believed. All sides made adjustments to their positions regarding Section 180(c) policy once they were provided two things:
 - a reasonable explanation for why their position would not work, and
 - credible efforts to address the concerns fueling their initial position or viewpoint.
6. The current *Revised Proposed Policy* could be turned into an operational pilot project probably within two years because of the level of public acceptance surrounding its development.

¹⁸ Whether the delays in Section 180(c) negatively impacted public acceptance or political support for OCRWM is beyond the scope of this paper. There is certainly a strong argument to be made that the program would have had stronger support had OCRWM engendered broader trust and confidence from public safety officials, elected officials, and the general public across the nation.

7. The success of the TEPP program makes implementation of Section 180(c) easier and more efficient because the training and technical assistance aspects required by Section 180(c) already exist.

The options for next steps, based on this analysis, are as follows:

1. Consider implementing the pilot program for Section 180(c) before a repository or storage site is identified. This would preserve the progress OCRWM had attained by 2008 and could greatly increase the receptivity of a jurisdiction as a potential storage or repository site because the public safety and elected officials would be familiar with radioactive materials. Practical considerations include:
 - a. The consultative process and the policy outcome that resulted from OCRWM's third attempt are still valid.
 - b. The differences the Western Interstate Energy Board has towards the Revised Proposed Policy would need to be addressed. The content of this negotiation may be different since the proposed repository in Nevada has been cancelled.
 - c. If WIEB agrees, the documents that were drafted - the Revised Proposed Policy statement, the Draft Application Package, the pilot program implementation plan, and the Section 180(c) implementation plan - would need only minor updating.
 - d. Reconstituting the Topic Group to review and update these documents would take a year or less. Another year is required to publish the updated policy and the application package in the *Federal Register* for public comment, respond to the comments, and reissue the final documents.
 - e. A pilot program would not require specific routes or a destination because likely routes could be used. A state or tribe could propose a utility or DOE site as the point of origin and then select the route or routes across their jurisdiction in accordance with routing regulations.
 - f. The TEPP program would need funding to update the MERRTT curricula to include information about high-level waste and spent nuclear fuel and they would need additional funds to cover expanded responsibilities.
 - g. The pilot's scope could be broad and include a leased and empty cask that travels by rail or highway along a route. The cask could serve as both a training opportunity for public safety officials and a communications tool to engage the broader public¹⁹.
 - h. The pilot's scope could be narrow and simply update the TEPP training and make it available along the route, provide technical assistance to the public safety personnel along the route and answer their questions, then assess the effectiveness of the grant application process, the training dissemination, and the grant closeout process.
 - i. The pilot program would take from two to four years depending on how many jurisdictions participated and how broad the scope of the pilot. It would take about one year after the pilot to evaluate its effectiveness and write necessary changes into the documentation.

¹⁹ WIPP, Cesium and other shipping programs did this with a mock cask along the routes. It had a great positive effect on people to see the robustness of these casks.

2. Consider implementing the recommendations from the National Academies *Going the Distance* study and initiating a national-level emergency preparedness program under the existing statutory authority of Section 180(c) of the NWPA. This would build national familiarity with and preparedness for all spent fuel and high-level waste shipments. As with WIPP's experience, some of the most trustworthy members of local communities -- the emergency response professionals -- would be familiar with and comfortable with handling these shipments regardless of their source or destination. The training could be tied to the removal of spent fuel from orphan sites around the country to one or more consolidated storage sites.
3. Consider amending the language of Section 180(c). Two options are:
 - Adopt wording similar to the WIPP Land Withdrawal Act.
 - Rewrite along the lines of:

“The Secretary [of Energy] shall provide technical assistance and funds to states and tribes for training of public safety officials of state, tribal, and local governments through whose jurisdiction the Secretary plans to transport spent nuclear fuel or high-level radioactive waste [to a NWPA-authorized facility] and for planning for such transport. Training shall cover procedures required for safe routine transportation of these materials, as well as procedures for dealing with emergency response situations and handling public information for shipments.” A pilot program shall test and evaluate the policies and procedures developed to implement the program.

Any significant rewrite of the statute could extend the time period to achieve an operational Section 180(c) program because the new language may require reopening the policy and rethinking how Section 180(c) might integrate into the larger transportation program.

4. If Congress directs an agency or organization to begin shipments, there are additional findings that would contribute to their success:
 - Hire staff with the skills, ability, and desire to work with multiple competing interests, to build trust with diverse stakeholder populations, and to handle emotionally-charged situations. Not everyone can do this job.
 - Ensure management supports the staff working on the front lines of policy design and implementation. Management's philosophy must reinforce the idea that transparency and consultative problem-solving will build a more durable and defensible program. This consistency in philosophical

approach must extend to giving the front line staff the authority and the framework to negotiate and resolve issues.

- Provide a sufficient schedule to allow for consultations and interactions. People participating in an interactive process need sufficient time to learn about the issues from multiple viewpoints, analyze the options at hand, and assess the potential impacts of decisions. The process can benefit from a hard deadline as long as the process is not truncated by artificial deadlines and rushed negotiations.
- Each participant's roles and responsibilities must be clearly drawn. The institution must be willing to say "no" but then explain the basis for their decision and offer alternatives.
- Integrate all aspects of transportation planning. Expect and provide for integration in planning rather than isolating staff and stakeholders by their issue area.
- Build formal evaluation processes into the pilot to test and validate outcomes.

Section 180(c) or a similar program can be implemented relatively quickly because of the work accomplished from 2003 – 2009 and the maturity of the TEPP program and MERRT training. The benefits of starting a training and communications program with the state, tribal, and local emergency response community would accrue to any future shipments of radioactive material and can only lower the perceived fears the public has about these shipments. The recommendations from the *Going the Distance* study, combined with the lessons learned from DOE's previous shipping campaigns, make the implementation of Section 180(c) a low-risk, high-reward course of action.

Attachment A

PUBLIC LAW 102-579

THE WASTE ISOLATION PILOT PLANT LAND WITHDRAWAL ACT

as amended by Public Law 104-201 (H.R. 3230, 104th Congress)

Section 16 Transportation

(c) ACCIDENT PREVENTION AND EMERGENCY PREPAREDNESS.—

(1) TRAINING.—

(A) IN GENERAL.— In addition to activities required pursuant to the Supplemental Stipulated Agreement, the Secretary shall, to the extent provided in appropriation Acts, provide technical assistance and funds for the purpose of training public safety officials, and other emergency responders as described in part 1910.120 of title 29, Code of Federal Regulations, in any State or Indian tribe through whose jurisdiction the Secretary plans to transport transuranic waste to or from WIPP. Within 30 days of the date of the enactment of this Act, the Secretary shall submit a report to the Congress and to the States and Indian tribes through whose jurisdiction the Secretary plans to transport transuranic waste on the training provided through fiscal year 1992.

(B) ONGOING TRAINING.— If determined by the Secretary, in consultation with affected States and Indian tribes, to be necessary and appropriate, training described in subparagraph (A) shall continue after the date of the enactment of this Act until the transuranic waste shipments to or from WIPP have been terminated.

(C) REVIEW OF TRAINING.— The Secretary shall periodically review the training provided pursuant to subparagraph (A) in consultation with affected States and Indian tribes. The training shall also be reviewed by the Occupational Safety and Health Administration, and the National Institute for Occupational Safety and Health, for compliance with part 1910.120 of title 29, Code of Federal Regulations.

(D) COMPONENTS OF TRAINING.— The training shall cover procedures required for the safe routine transportation of transuranic waste, as well as procedures for dealing with emergency response situations, including—

(i) instruction of government officials and public safety officers in procedures for the command and control of the response to any incident involving the waste;

(ii) instruction of emergency response personnel in procedures for the initial response to an incident involving transuranic waste being transported to or from WIPP;

(iii) instruction of radiological protection and emergency medical personnel in procedures for responding to an incident involving transuranic waste being transported to or from WIPP; and

(iv) a program to provide information to the public about the transportation of transuranic waste to or from WIPP.

(2) EQUIPMENT.— The Secretary shall enter into agreements to assist States through monetary grants or contributions in-kind, to the extent provided in appropriation Acts, in acquiring equipment for response to an incident involving transuranic waste transported to or from WIPP.

(d) TRANSPORTATION SAFETY PROGRAMS.— The Secretary shall, to the extent provided in appropriation Acts, provide in-kind, financial, technical, and other appropriate assistance to any State or Indian tribe through whose jurisdiction the Secretary plans to transport transuranic waste to or from WIPP, for the purpose of WIPP-specific transportation safety programs not otherwise addressed in this section. These programs shall be developed with, and monitored by, the Secretary.

Appendix B

Resources

<http://coloradoindependent.com/38278/colorado-officials-yellowcake-uranium-trucks-can-go-wherever-they-want>

<http://www.em.doe.gov/TEPPPages/teptraining.aspx>.

<http://www.nv.doe.gov/library/factsheets/rap.pdf>

International Atomic Energy Agency. Safety Standard Series No. TS-G-1.2 (ST-3) *Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material: Safety Guide*. Vienna, 2002

Joint letter from the four State Regional Groups to Gary Lanthrum and Dennis Ashworth, U.S. Department of Energy, March 5, 2007.

Letter from the Council of State Governments Midwest, Midwestern Radioactive Materials Transportation Project to Ward Sproat, U.S. Department of Energy, Office of Civilian Radioactive Waste Management, January 24, 2007.

Letter from the Department of Homeland Security, Office of State and Local Government Coordination and Preparedness, J.S. Whitney to Ella McNeil, U.S. Department of Energy, RE: Modular Emergency Response Radiological Transportation Training (MERRTT), March 2, 2005.

Letter from the Western Interstate Energy Board, High-Level Waste Committee to Corinne Macaluso transmitting *Comments on OCRWM's Section 180(c) Revised Proposed Policy and Procedures for Implementing Section 180(c)*, January 17, 2008.

Memorandum of Agreement Between the Western States and U.S. Department of Energy, Regional Protocol for the Safe Transport of Transuranic Waste to the WIPP, U.S. Department of Energy, Washington, DC, December 1995

Sharp, J., Grady, S., Harrison, G., Martin Marietta Energy Systems, Inc. and SAIC for the U.S. Department of Energy, Office of Civilian Radioactive Waste Management, *Draft Research Paper to Support the Development of Section 180(c) Policy Options*, Transportation Operations Project Office, Oak Ridge National Laboratory, Oak Ridge, Tennessee, December 1991.

U.S. Department of Energy, Office of Civilian Radioactive Waste Management, Office of Logistics Management, *Radioactive Waste Logistics Benchmarking: Project Status Report, Interim Findings*, May 2007.

_____, Office of Civilian Radioactive Waste Management, *Benchmarking Project, Report from AREVA NC Site Visit and Interview*, Spring 2007, March 2008

_____, Office of Civilian Radioactive Waste Management. *Civilian Radioactive Waste Management Program Plan*, DOE/RW-0458, Revision 1, Washington, D.C., May 1996.

_____, Office of Civilian Radioactive Waste Management. *Strategic Plan for the Safe Transportation Spent Nuclear Fuel and High-Level Radioactive Waste to Yucca Mountain: A Guide to Stakeholder Interactions*. Washington, D.C., November 18, 2003.

_____, Office of Civilian Radioactive Waste Management; *Safe Routine Transportation and Emergency Response Training; Technical Assistance and Funding, Notice of Revised Proposed Policy and Procedures, Response to Comments*. *Federal Register*, Vol. 63, No. 83, Thursday, April 30, 1998

_____, Office of Civilian Radioactive Waste Management, *Notice of Revised Proposed Policy and Request for Comments*, *Federal Register*, Vol. 73, No. 212, October 31, 2008.

_____, Office of Civilian Radioactive Waste Management, *Draft Strategy for OCRWM to Provide Training Assistance to State, Tribal, and Local Governments*, DOE/RW-0332P, Washington, D.C., January 1992.

_____, Office of Civilian Radioactive Waste Management, *Final Strategy for OCRWM to Provide Training Assistance to State, Tribal, and Local Governments*, DOE/RW-0374P, Washington, D.C., November 1992.

U.S. Department of Labor, Occupational Safety and Health Administration. Title 29 Code of Federal Regulations 1910.120, Hazardous Waste Operations and Emergency Response.