

PART II. RECOMMENDED PRACTICES

Note: The U.S. Constitution recognizes Native American Tribes as distinct governments with the same powers to regulate their internal affairs as federal and state governments. Therefore, shippers must consult with and treat Tribes affected by shipments of radioactive material in the same way they would states. In this guide, “stakeholders” should be understood as “states and Tribes.”

Transportation Planning

The time required to coordinate with the states on transportation planning depends upon the scale of the shipping campaign. For new campaigns or shipments over routes not previously used, shippers should begin the transportation planning process two years prior to the anticipated commencement of shipments. This recommended time frame will ensure that the institutional aspects of the shipping campaign are addressed in tandem with technical ones. A first step in the transportation planning process would be to present preliminary information to the potentially affected states—either individually or, if more than one Midwestern state will be affected, through the biannual meetings of the Midwestern Radioactive Material Transportation Committee.

Consultation and cooperation with the affected states should take place through the regularly scheduled meetings of the Midwestern Radioactive Material Transportation Committee, conference calls, and/or meetings involving more than one of the regional cooperative-agreement groups (when states in more than one region will be affected). Under certain circumstances, shippers might convene a separate meeting specifically for the purpose of planning a shipment or shipping campaign.

Shippers and states will benefit from the preparation of transportation plans for all shipments of spent nuclear fuel, high-level radioactive waste, transuranic waste, and HRCQ material through the Midwestern region. The Midwestern corridor states must review and provide input on at least one draft of each transportation plan. The review process will involve the members of the Midwestern Radioactive Materials Transportation Committee from the affected states and be coordinated through CSG Midwest.

For all shipping campaigns, a final transportation plan—having undergone review by the corridor states—should be in place at least two weeks prior to the first shipment.

The timeline for finalizing the transportation plan is lengthier for the program to ship spent nuclear fuel and high-level radioactive waste to a national repository, [Consolidated Interim Storage Facility \(CISF\)](#), or temporary storage facility. For shipments conducted as part of this program, the states expect to be involved in developing the draft transportation plan, with the final plan in place six months prior to the first shipment. The shipper should then annually update the [plan’s](#) state-related information, ~~in the plan~~ in consultation with CSG Midwest. The affected states must have an opportunity to provide input into any substantive changes to the plan, including route identification.

Acceptable transportation plans should adhere to the guidelines laid out in this planning guide. Elements of an acceptable transportation plan include:

- an explanation of the purpose of, or need for, the shipments;
- a definition of the roles and responsibilities of all parties involved;
- an emergency management plan (see the section on Emergency Management Plan);

- a communications plan, including an approach to provide information to the public and the media;
- shipping mode and carriers to be used;
- preferred route and alternatives, if any;
- a general description of security considerations, as well as a detailed security plan (the latter to be distributed only to those with a “need to know”);
- an incident or accident recovery plan, including a list of local response contractors;
- a copy of the NRC or DOE Certificate of Compliance for the shipping container (if applicable); and
- a list of lead points of contact for the shipper, the carrier, and the corridor ~~states and tribes~~ stakeholders.

While the elements listed above are best practices and suggestions identified by affected state entities, there are also legal regulations that shippers must follow. These include 10 CFR 73.25-38, ~~subpart “Physical Protection of Special Nuclear Material in Transit”~~ for special nuclear material and 10 CFR 37.71-81, ~~“Subpart D—“Physical Protection in Transit”~~ for Category 1 and Category 2 quantities of radioactive material.

In addition to the transportation plan, which may be available to the public, the shipper should provide corridor states with a complete description of the package, its contents, and the activity in the package and dose rates.

To the extent practicable, shippers should use ~~as a model~~ other transportation plans as a model of that directed successful shipping campaigns of radioactive waste or material through the Midwestern region. Examples of such transportation plans can be attained by contacting the DOE Office of Packaging and Transportation at ASKPAT@hq.doe.gov.

Following the completion of a shipment or shipping campaign, shippers should compile the lessons learned from the experience for the purpose of improving future shipments. These lessons-learned reports should be shared with Midwestern states, to the extent ~~permissible~~ permissible. To assist in the compilation of lessons learned, CSG Midwest will solicit input from the Midwestern states.

Mode and Route Selection

Mode: Selection of the shipping mode is the responsibility of the shipper. Safety must be the primary consideration in evaluating and ~~ultimately,~~ selecting a mode. The Midwestern states ~~believe~~ recommend that rail shipments should take place using dedicated trains, not general freight service.

Route: Shippers will identify the routes for highway and rail shipments in consultation with the potentially affected states.

The DOT requirements for highway route selection are in 49 CFR 397.101 and requirements for rail route selection are in 49 CFR 172.820. Shippers must follow these requirements when selecting routes for shipments. For all modes, safety must be the primary consideration in deciding routes. For truck shipments, shippers will consider accident rates, population exposure, and time in transit when evaluating routes. For shipments by rail, the Federal Railroad Administration (FRA) lists ~~these three factors among a total of~~ 27 factors that rail carriers must consider when conducting annual risk analyses of available routes (see 49 CFR 172.820 and Appendix D to Part 172).

- Volume of hazardous material transported;
- Rail traffic density;
- Trip length for route;
- Presence and characteristics of railroad facilities;
- Track type, class, and maintenance schedule;
- Track grade and curvature;
- Presence or absence of signals and train control systems along the route (“dark” versus signaled territory);
- Presence or absence of wayside hazard detectors;
- Number and types of grade crossings;
- Single versus double track territory;
- Frequency and location of track turnouts;
- Proximity to iconic targets;
- Environmentally sensitive or significant areas;
- Population density along the route;
- Venues along the route (stations, events, places of congregation);
- Emergency response capability along the route;
- Areas of high consequence along the route, including high consequence targets as defined by 49 CFR 172.820(c);
- Presence of passenger traffic along route (shared track);
- Speed of train operations;
- Proximity to en-route storage or repair facilities;
- Known threats, including any non-public threat scenarios provided by the Department of Homeland Security or the Department of Transportation for carrier use in the development of the route assessment;
- Measures in place to address apparent safety and security risks;
- Availability of practicable alternative routes;
- Past incidents;
- Overall times in transit;
- Training and skill level of crews; and
- Impact on rail network traffic and congestion.

For all modes, it is important for shippers and affected states to coordinate with the carriers involved to ensure that selected routes are consistent with the aforementioned regulatory guidance and any applicable agreements with stakeholders.

For shipping campaigns involving spent nuclear fuel, high-level radioactive waste, or transuranic waste, at least one year prior to the first shipment¹, the shipper should present a proposed route or routes to the states for their consideration. If a state proposes an alternative route that would change the proposed route through one or more other states, both the proposing state and the shipper should consult with the affected state(s) prior to the alternative route being selected. The Midwestern Radioactive Materials Transportation Committee is the appropriate forum for addressing any interstate disagreements. Proposed changes to selected routes should be presented to all potentially affected states in a timely manner for their review and consideration.

If the shipper consults with the FRA regarding potential rail routes, the shipper should also seek the input of representatives of the state rail safety programs in the potential corridor states (see Appendix C).

All highway shipments will be treated as HRCQ shipments as a matter of policy.

¹ For shipments conducted under the Nuclear Waste Policy Act (NWPA), the states must know the anticipated routes five years prior to the start of shipments, consistent with the proposed policy for implementing Section 180(c) of the NWPA.

DOT regulations require motor carriers to use only preferred routes that minimize time in transit (49 CFR 397.101). (See Appendix C for information on state routing contacts.) As requested, CSG Midwest will assist states that seek to designate preferred routes.

Carrier Selection and Driver/Crew Compliance

Shippers should select only those carriers that have exceptional performance records. Truck drivers should, at a minimum, meet the requirements in place for WIPP drivers. Specifically, drivers should have logged a minimum of 325,000 **total** miles in the last five years or 100,000 miles per year in two of the last five years in commercial semi-tractor combination over-the-road operation.

These requirements can be found at www.wipp.energy.gov/fctshts/driver.pdf.

For shipping campaigns of long duration, drivers should also have training in Commercial Vehicle Safety Alliance (CVSA) Level VI inspection procedures, Transportation Tracking and Communications System (TRANSCOM) (if applicable), and awareness-level first responder training. Licensees who are shipping material ~~that exceed~~**exceeding** the NRC's quantity of concern levels for specific isotopes are required to provide background checks for site personnel and carriers. Quantity of concern levels can be found in ~~the~~ Appendix **A** to 10 CFR 37 or equivalent Agreement State Regulations.

Shippers must consider only carriers that earn satisfactory DOT ratings, which can be found on the Federal Motor Carrier Safety Administration's Safety and Fitness Electronic Records (SAFER) System. In addition, if DOE or one of its contractors acts as the shipper, the carrier must also have satisfactory ratings under DOE's Motor Carrier Evaluation Program. When selecting carriers for DOE shipments, it is the states' expectation that DOE will abide by all applicable agreements with the states and the regional groups.

With regard to train crews, all locomotive engineers who are assigned to shipments must meet the FRA's Locomotive Engineer Certification requirements. In addition, all members of the train crew must have received hazardous material training. Such certification and training will be verified by the FRA or FRA-certified state inspectors. Although not required by regulation, the FRA's "Safety Compliance Oversight Plan for Rail Transportation of High-Level Radioactive Waste and Spent Nuclear Fuel" (SCOP) specifically states that shippers should provide all train crew members with a radioactive material awareness information safety briefing prior to shipments commencing (US DOT 1998, Task ER-1).

For shipping campaigns of long duration (i.e., greater than one year), the shipper should provide the carrier's draft management plan to the corridor states for their review and comment at least 45 days prior to the first shipment. CSG Midwest will coordinate the Midwestern states' review of the draft plan.

The carrier management plan should address the following topics:

- quality assurance,
- emergency response,
- driver/crew training,
- recovery,
- security,
- equipment, and
- communications.

The plan should also contain a statement from the carrier regarding its commitment to adhere to the requirements of the shipper's transportation plan. In addition, the carrier management plan should

address the interface between the carrier, the shipper, and state law enforcement and emergency response personnel.

Packaging

Shippers must use NRC-approved Type B packaging for all shipments of spent nuclear fuel, high-level radioactive waste, transuranic waste, and HRCQ material. All packaging must be used in accordance with the current certificate of compliance.

For the purposes of training responders and conducting public information activities, shippers should provide the affected state agencies with general written information regarding the packaging they plan to use for shipments through the Midwestern region.

Advance Notification of Shipments

Spent Nuclear Fuel: Advance notification for spent nuclear fuel shipments must adhere to the NRC's requirements codified in 10 CFR 71.97, 10 CFR 73.37, state requirements, and other guidance. Although useful for tracking shipments, TRANSCOM is not an acceptable means of distributing the NRC-required advance notification. In the event a shipment is canceled or the schedule changes by six hours or more, shippers must notify the governors' designees and Tribal officials, as applicable (see Appendices C and E), in the affected ~~jurisdictions~~ states by telephone. Please check the NRC's website, or the online version of the Planning Guide, for the most up to date governor's' designees. As permitted by 10 CFR 73.21, the governor's designee may share advance notification with other state agencies and local government officials on an "as needed" basis. The governors' designees recognize their responsibility to protect safeguards information as required by 10 CFR 73.21.

In addition to the NRC-required advance notification, the shipper should provide each corridor state with a "courtesy call" ~~a minimum of at least~~ two hours prior to the shipment entering the state's jurisdiction. Arrangements for additional calls may be worked out by the shipper, carrier, and the requesting corridor state.

Transuranic Waste: As negotiated, for all shipments, DOE will distribute an annual projection of shipments to all affected states and CSG Midwest by January 31. The annual projection will be directed to the Midwestern governors and the members of the Midwestern Radioactive Materials Transportation Committee in states affected by transuranic waste shipments. The projection will show all planned shipments of transuranic waste for the upcoming 12 months. Information on the shipments will include points of origin and destination, mode, and the number and type of packages. DOE will send the states and CSG Midwest an updated annual projection by July 31.

DOE will provide the states and CSG Midwest with a 14-day notification prior to the first five transuranic waste shipments along a particular route. In the event of a significant hiatus in shipments over a particular route (e.g., six months or more), DOE will provide 14-day notifications to the affected states prior to shipments resuming. This notification may consist of a single letter for all five shipments, provided that an accurate schedule for all five shipments has been determined prior to the first shipment. The following information will be included in the 14-day notifications for transuranic waste shipments:

- name, address, and telephone number of the shipper, carrier, and receiver;
- point of origin of the shipment;
- destination for the shipment;
- description of the shipment (material, type and number of containers, mode, and route); and
- estimated date and time of departure from the point of origin.

DOE will ensure that an eight-week rolling projection of shipments will be sent via e-mail to the affected states and CSG Midwest. The eight-week rolling projection will be updated as necessary. The states will receive notice of cancellations or delays in scheduled shipments through the eight-week rolling projection or through shipment-specific e-mail notifications from WIPP.

All dates in the 14-day and eight-week notices must be actual planned shipping dates, not placeholder dates. Shipments should not be scheduled until all regulatory approvals have been received.

Two hours prior to a shipment entering a state, the WIPP Central Monitoring Room or other responsible party will telephone the designated state point of contact.

To facilitate long-term planning, the Midwestern states endorse DOE's Prospective Shipment Report ~~of,~~ ~~For private shipments, similar information in a format acceptable as a tool for providing the states with~~ information on upcoming shipments of spent nuclear fuel, transuranic waste, and other radioactive material should be provided to the states in an acceptable format. Shipper points of contact, possible transport mode and route(s), and the general time frame for shipments are important pieces of long-term planning information to provide to the potentially affected states.

HRCQ: Advanced notification for shipments of HRCQ radioactive material must comply with NRC requirements, state requirements, and other guidance. HRCQ shipments of NRC Category 1 material, found in the Appendix to 10 CFR 37 or equivalent Agreement State regulations, must comply with the pre-planning and advanced notification requirements of 10 CFR Part 37; specifically, 37.75(a), 37.75(e), and 37.77.

Public Information

As part of the transportation planning process, shippers should prepare a communications plan that defines the roles and responsibilities of the shipper, ~~states, tribes~~ stakeholders, and other parties in providing accurate information on the shipment or shipping campaign to the media and the public in a timely manner. The plan should also identify points of contact and spokespersons of the shipper, affected ~~states~~ stakeholders, and other parties (e.g., CSG Midwest).

~~States~~ Stakeholders take different approaches to ~~provide~~ providing the public with information on shipments, ~~with s~~ Some responding to inquiries while others disseminate information on a routine basis along the proposed routes. Regardless of the approach, however, these ~~state~~ stakeholder-led public information programs benefit from fact sheets and other information provided by the shipper. To the extent practicable, shippers should make use of currently available public information on radioactive material transportation, supplementing these materials with shipment-specific information. Shipment-specific fact sheets should be made available for all significant shipping campaigns, with different versions prepared for different audiences (e.g., emergency responders versus the general public).

The Midwestern states encourage shippers to follow the guidelines in the National Transportation Stakeholders Forum’s “DOE Site-Specific Transportation Campaign Fact Sheet Development Guide.” Draft versions of new materials should be distributed to the states for review and comment. This document can be found at

www.csgmidwest.org/MRMTP/MRMTP_publicinfo.aspx~~https://csgmidwest.org/about-us/mrmtp/project-resources.~~

The Midwestern states develop their own public information programs regarding the transport of radioactive material. In responding to inquiries from the media or the public, states answer questions related to their role in radioactive material shipment planning. Questions regarding program-specific matters will be referred to the shipper.

Communicating with local government officials regarding shipping activities is primarily a state role. If a local government representative contacts the shipper for information, the shipper should coordinate its response with the appropriate state government agency. Questions regarding state-specific matters should be referred to the appropriate state point(s) of contact. Shippers should provide the state point(s) of contact with sufficient technical information to facilitate responses to inquiries from the public (e.g., through the aforementioned fact sheets).

For shipments of spent nuclear fuel and Category 1 material, the shipper’s and corridor states’ public information programs ~~will~~ adhere to the NRC’s requirements regarding the protection of safeguards information (10 CFR 73.21) ~~or~~ and protecting the information against unauthorized disclosure (10 CFR 37.77), as applicable. If there is a specific window of opportunity for shipping (e.g., April-October), public information material should refrain from mentioning the exact months and instead refer to seasonal time frames (e.g., summer).

Emergency Management Considerations

Emergency Management Plan: Shippers should ensure that the transportation plan covering their shipments includes an adequate emergency management plan. As part of that plan, shippers should identify the following information:

- an identification of the associated hazards and potential threats;
- roles and responsibilities of all potentially involved parties within each state stakeholder jurisdiction;
- the proper procedures for responding to an incident involving the shipment(s) (including emergency communications paths and the appropriate Emergency Response Guides for the material being shipped);
- a list of emergency contacts for the shipper, carrier(s), states, and, if applicable, Tribes;
- a detailed description of the resources available from the shipper or the carrier to assist the incident commander during an actual emergency; and
- the shipper’s plans for conducting any necessary recovery and cleanup operations.

In addition, the shipper should ensure that the carrier’s emergency response plan is consistent with the shipper’s emergency management plan. Shipper and carrier plans should commit to following the ~~incident command system~~ National Incident Management System (NIMS).

The Midwestern corridor states should have an opportunity to review and provide input into both the shipper's and the carrier's emergency management plans.

Notification: In the event of an **incident** or **emergency**, the carrier or other person will notify the local emergency response organization. After the shipper receives notification of the incident, the shipper will notify the state 24-hour contact. For an event that meets the following regulatory reporting criteria, the shipper will notify the affected states through their 24-hour emergency numbers within one hour of receiving the initial notification:

- fatality/injury requiring immediate treatment away from scene;
- evacuation of general public of one hour or more;
- fire, breakage, spillage, or suspected radioactive contamination;
- security breach/incident;
- collision resulting in disabling damage or derailment; or
- road or facility closure or shut down exceeding one hour.

If the shipper is notified of an event that does not clearly meet the reporting criteria listed above, the shipper will determine whether notification to state points of contact is appropriate. For example, an event that does not meet any of the above criteria but might generate public and/or media attention or could cause the dispatch of any services would warrant notification. Any uncertainty as to whether a notification should be made will be resolved by making the notification.

As it becomes available, the following information should be provided to the affected states:

- the identity of the caller and call-back telephone number;
- location of the event;
- a brief description of the event (hazards of the material being shipped, injuries, environmental releases and/or personnel exposures, protective actions implemented, protective actions recommended, and on-scene responders);
- date and time of the event; and
- other notifications that have been made, including to the media interest.

Transportation operations contingencies include adverse weather, natural disasters, vehicle breakdowns, travel and road/rail conditions, and unanticipated delays that could interrupt normal transportation, but do not meet the criteria for emergency notification. For spent nuclear fuel, high-level radioactive waste, and transuranic waste shipments, notification for any transportation operations contingency will be provided to the 24-hour emergency number or through TRANSCOM-the applicable satellite tracking system for an anticipated delay of more than two hours (or as specified in the shipping campaign-specific transportation plan).

Emergency Response: State, tribal, and local governments have the primary responsibility and authority to respond to and manage emergencies within their jurisdictions. Incident command is the responsibility of the state, tribal, or local government. As required by federal regulations, the shipper will provide emergency response information on shipping papers. This information will include a 24-hour emergency telephone number for the shipper. In the event of an incident or emergency, the shipper will also provide technical assistance for emergency response should the carrier fail to do so. As requested by the incident commander or other responder, the shipper will also provide information to support public information needs.

Shipments of Category 1 material will follow the reporting requirements identified in 10 CFR 37.81 as well as the hazardous material emergency response reporting requirements in 49 CFR 171.15 and 171.16.

Emergency Management Assistance Compact: All of the Midwestern states are members of the Emergency Management Assistance Compact (EMAC), which is administered by the National Emergency Management Association. EMAC is a national mutual aid agreement approved by Congress in 1996. Through EMAC, states can request assistance from other states in the event of “any emergency or disaster that is duly declared by the governor of the affected state(s), whether arising from natural disaster, technological hazard, civil emergency aspects of resources shortages, community disorders, insurgency, or enemy attack.” EMAC also provides for the mutual cooperation among states in emergency-related exercises, testing, or other training activities. In the event of an emergency involving a shipment of radioactive waste or material, EMAC would be available to the states as a means of tapping assistance from other states, including those outside the region.

Assistance for the States: States have the primary responsibility for protecting the public in their jurisdictions. The Midwestern states develop their own plans and procedures for responding to an incident involving radioactive material shipments. In most instances, these plans will be part of overall emergency response plans covering all types of hazards.

In addition to emergency response plans, the Midwestern states are also responsible for ensuring the safety of the public during routine transportation. Activities related to the safe, routine transportation of radioactive material include inspections, escorts, staff time for satellite tracking, contingency route designation, public information activities, and other operational activities. These activities contribute to shipment safety and increase the likelihood of public acceptance.

Because they also translate into real costs for the states, shippers should anticipate the financial assistance needs some states will have in connection with their shipments.

Cooperation with the states is crucial for the safe and efficient transport of spent nuclear fuel regardless of the shipper. It is the expectation of the Midwestern States that private shipments of spent nuclear fuel be handled in a manner similar to those conducted by DOE. Private shippers should cooperate with the states on the routing of the shipments. Private shippers should also provide financial and technical assistance to the states for emergency planning, training, and equipment.

Congress has mandated that DOE provide financial assistance to states for certain shipping campaigns. Under Section 16 of the WIPP Land Withdrawal Act, DOE is obligated to provide funding and technical assistance to corridor states to support accident prevention and emergency preparedness in connection with shipments to WIPP. In addition to providing such assistance for training and equipment, Section 16 also required DOE to provide “in-kind, financial, technical, and other appropriate assistance” to affected states for transportation safety programs that are specific to WIPP. The Midwestern states believe that, as a matter of policy, all of DOE’s shipments of transuranic waste should be treated as “WIPP shipments.”

~~Section 180(c) of the Nuclear Waste Policy Act (NWPA), as amended, requires DOE to provide similar assistance to help states to prepare for shipments of spent nuclear fuel and high-level radioactive waste to a federally owned repository or monitored retrievable storage facility. Assistance is not provided to states in preparation for shipments to privately owned interim storage facilities. The Midwestern states~~

~~maintain that funding and technical assistance under Section 180(c) should be available to the states at least four years prior to shipments. Section 180(c) funding should be predictable and should allow states the maximum flexibility to implement training programs that best meet their needs.~~

~~One limitation of Section 180(c) funding is that it is applicable only to spent nuclear fuel and high-level waste shipments to a federal facility authorized under the NWPA. The risks associated with shipments of spent nuclear fuel are similar regardless of the shipper or the destination. As a result, the states should receive financial and technical assistance similar to that intended under Section 180(c) if affected by DOE's shipments of spent nuclear fuel to DOE or private facilities.~~

~~Another limitation of Section 180(c) funding is that DOE's interpretation would restrict the funding to training and training-related activities. The Midwestern states feel that funding should also be provided for operational expenses. The Midwestern states recognize that operational activities including inspections, escorts, and tracking contribute to safe routine transportation and enhance public acceptance of shipments.~~

Without financial assistance or some other source of revenue, the states would not be in a position to devote significant resources to developing state and local capabilities specifically for shipments of radioactive waste and material, including shipments of HRCQ material. WIPP funding, for example, helps to defray the costs to state taxpayers of public safety actions in connection with shipments (e.g., safety inspections, security and health physics escorts, emergency responder training, and public information). Private shippers do not provide this type of funding to states in connection with shipments of HRCQ material, even though these materials pose a greater hazard to the public than transuranic waste shipments. As a result, some states have enacted fee systems designed to help offset their costs (see Appendix D).

Federal hazardous materials transportation law permits states to charge reasonable fees on shipments as long as the revenue is used for purposes related to hazardous materials shipments. The activities the states undertake in connection with HRCQ shipments are similar to those necessary in connection with shipments of spent nuclear fuel. State shipment fees make it possible for state agencies to undertake these important public safety measures ~~and charge the costs to the shippers that benefit from the shipments.~~

Section 180(c): Section 180(c) of the Nuclear Waste Policy Act (NWPA), as amended, requires DOE to provide similar assistance to help states to prepare for shipments of spent nuclear fuel and high-level radioactive waste to a federally owned repository or monitored retrievable storage facility. Assistance is not required to be provided to states in preparation for shipments to privately owned interim storage facilities. The Midwestern states maintain that funding and technical assistance under Section 180(c) should be available to the states at least four years prior to shipments. Section 180(c) funding should be predictable and should allow states the maximum flexibility to implement training programs that best meet their needs.

One limitation of Section 180(c) funding is that it is applicable only to spent nuclear fuel and high-level waste shipments to a federal facility authorized under the NWPA. The risks associated with shipments of spent nuclear fuel are similar regardless of the shipper or the destination. As a result, the states believe they should receive financial and technical assistance similar to that intended under Section 180(c) for all shipments of spent nuclear fuel to DOE or private facilities.

Another limitation of Section 180(c) funding is that DOE's interpretation would restrict the funding to training and training-related activities. The Midwestern states feel that funding should also be provided for operational expenses. The Midwestern states recognize that operational activities including inspections, escorts, and tracking contribute to safe routine transportation and enhance public acceptance of shipments.

Inspections

The Midwestern states recognize the value of standardized inspection procedures that can promote reciprocity ~~of between~~ state inspections. For truck shipments, the CVSA established its Level VI inspection procedures for shipments of transuranic and HRCQ radioactive material. An equivalent system does not yet exist for rail shipments but is under development by the National Transportation Stakeholders Forum (NTSF) Rail/ Routing Ad Hoc Working Group. ~~The Midwestern states have advocated that DOT establish standardized procedures such as these as a reciprocal program that can facilitate state inspections of rail shipments.~~

Point of Origin: Shipments must be inspected by qualified state inspectors prior to departure. A radiological inspection of the package must be part of all point-of-origin inspections.

For truck shipments, CVSA Level VI-certified state and federal inspectors will adhere to the CVSA Level VI inspection procedures ~~or and~~ other applicable state procedures ~~that provide at least an equivalent level of safety.~~ The Federal Motor Carrier Safety Administration requires that all vehicles used to transport a highway route-controlled quantity of Class 7 (radioactive) material, defined in 49 CFR Part 173.403, must have a CVSA Level VI pre-trip point of origin inspection, as defined in 49 CFR 385.417 (b)(1). Vehicles may not be released from their point of origin until they are defect free of all Level VI inspection criteria.

For rail shipments, motive power ~~and~~ equipment ~~and~~ and hazardous material inspections will be conducted in accordance with federal regulations, the FRA's SCOP (US DOT 1998, Task OI-4), Association of American Railroads recommended practices, state requirements, and industry standards. All inspections of equipment and packages will be performed either by ~~an~~ or in the presence of ~~an~~ an FRA-certified state inspector or ~~if~~ if a state does not have a certified state inspector, a federal inspector. Rail shipments must not be dispatched until they are in compliance with the aforementioned standards and recommended practices.

En Route: At their discretion, states on the shipping routes may choose to inspect shipments and they reserve the right to choose the level of inspection to conduct. To encourage reciprocity, shippers of large-scale campaigns should coordinate with states to develop an approach to inspections that recognizes state laws, policies, or rules that require inspections. The inspection points should be worked out well in advance of the shipment. For truck shipments, ports of entry are generally acceptable. For rail shipments, the shipper and carrier should strive to arrange crew changes, routine inspections, etc., at a point that will accommodate the needs of state inspectors. To meet the intent of state policies or laws, the inspection points for rail and truck shipments must be reasonably close to the state's border.

One Midwestern state (Illinois) requires en route inspections of all shipments of spent nuclear fuel, high-level radioactive waste, transuranic waste, and HRCQ shipments of radioactive material. Other states may choose to conduct en route inspections at their discretion. Shipments by truck must not proceed until any out-of-service criteria violations have been corrected consistent with federal regulations and

CVSA Level VI criteria. Rail shipments must not proceed until they are in compliance with all applicable FRA requirements.

Security

The security of radioactive material shipments is a concern of the shipper, carrier, and state agencies responsible for law enforcement and emergency management. To ensure the proper coordination, shippers should communicate with the state governors' designees and other authorized personnel regarding security matters, including escorting arrangements, threat assessments, the identification of safe parking areas, and additional security requirements for shipments placed in safe parking.

For commercial shipments of spent nuclear fuel, shippers must follow NRC rules, regulations, and orders for physical protection (10 CFR Part 73). These requirements include prior route approval, safeguards provisions (including escorts), and advance notification to the states. In addition, shippers must verify that carriers have met their own responsibilities under federal regulations and guidance. In the Midwestern region, one state (Illinois) requires a state escort for all shipments of spent nuclear fuel, high-level radioactive waste, transuranic waste, and HRCQ shipments of radioactive material. Other states may choose to escort shipments based on current security threats, as a matter of policy, or to meet the intent of the NRC's regulations.

Shippers should seek the input of state law enforcement officials and the governors' designees under 10 CFR 73.37 on security plans for shipments. Shippers should also consider using state police or other qualified state agency escorts for their shipments.

For shipments of Category 1 or Category 2 material, shippers must follow NRC regulations for physical protection (10 CFR 37.79). These requirements include movement and monitoring controls, a trained accompanying driver, written procedures, and communication procedures. State security escorts for Category 1 material are taken into consideration under 10 CFR 37.75.

Safe Parking

The selection of safe parking areas will be coordinated with the [states and tribes stakeholders](#) through which the shipments will pass. Security plans for the shipping campaigns should identify safe parking areas, additional security requirements for shipments in safe parking, and avoidance criteria for selecting other safe parking locations in the event the driver/crew cannot reach the pre-designated locations. Safe parking areas should be selected based on the desirability of a particular type of parking area and the ability of the driver/crew to reach the parking area. In addition, safe parking areas should achieve the following objectives:

- provide adequate separation from vehicles carrying hazardous material;
- facilitate required security (e.g., lighting); and
- provide adequate driver/crew services.

The shipper's security plan should identify safe parking areas on both sides of the borders between states.

State law enforcement personnel have the authority to direct shipments to specific parking areas. If state officials determine that a route deviation, rather than safe parking is necessary, they can inform

the driver or carrier through direct contact or through ~~TRANSCOM~~the applicable satellite tracking system (e.g., TRANSCOM). If a route deviation is deemed necessary by a state, that state must coordinate with any other state that will be affected by the route deviation.

The following avoidance factors should be applied in selecting a suitable safe parking location. It may not be possible to locate a parking site that meets all of the criteria listed. Nevertheless, the carrier should attempt to avoid the following:

- highly populated areas;
- heavily industrialized areas (e.g., refineries);
- hospitals and schools;
- areas with difficult access (e.g., no room for fire equipment);
- crowded parking areas (e.g., shopping malls and rest areas);
- residential areas;
- highway shoulders (for truck shipments); and
- areas with numerous pedestrians.

For shipments by truck, the carrier must not park on or within five feet of the traveled portion of a public street or highway except for brief periods when the necessities of operation require the vehicle to be parked and make it impractical to park the vehicle in any other place.

For shipments of Category 1 material, as prescribed in 10 CFR 37.75, it is the shipper's/licensee's duty to identify and provide the states a list of safe havens or safe parking areas. NRC NUREG-2155 defines a safe haven as a readily recognizable and readily accessible site at which security is present or from which, in the event of an emergency, the transport crew can notify and wait for the local law enforcement authorities.

TRANSCOM/Shipment Tracking

Shippers should use TRANSCOM, or other commercially available satellite tracking system, to track all shipments of spent nuclear fuel, high-level radioactive waste, and transuranic waste. In the event of operational problems, the shipper should follow the established backup procedures in their satellite tracking system's TRANSCOM user's manual. Shippers should arrange for corridor states to have access to TRANSCOM the system from the point of origin until one hour after the shipment has left the state's jurisdiction.

If the ~~TRANSCOM-satellite tracking~~ system is experiencing operational problems beyond those associated with individual users, shipments should not depart without the concurrence of all affected states.

For Category 1 shipments, shippers should use TRANSCOM or another commercially available satellite tracking system to track their shipments. 10 CFR 37.79 details the requirements for shipment tracking.

The requirements for highway shipments include:

- establishing a movement control center that will monitor shipment positions 24 hours a day, seven7 days a week;
- establishing redundant communications that allow the transport to contact the escort vehicle (when used) and movement control center at all times; and

- continuous and active monitoring of shipments by a telemetric position monitoring system or an alternative tracking system reporting to a movement control center.

Weather and Road Conditions

Shipments should not travel during severe weather conditions or when adverse weather or road conditions make travel hazardous. Severe weather conditions include the following storm warnings issued by the National Weather Service:

- winter storm warning,
- heavy snow warning,
- blizzard warning,
- blowing and drifting snow,
- freezing rain/drizzle,
- ice storm warning,
- sleet warning,
- dense fog advisory,
- tornado warning,
- severe thunderstorm warning,
- flash flood warning,
- river flood warning, and
- high wind warning.

Adverse weather conditions are those that prompt travel advisories cautioning against any unnecessary travel. As a general rule, Bbecause of the likelihood of severe winter weather resulting in shipment delays, ~~as a general rule,~~ shipments of spent nuclear fuel, high-level radioactive waste, transuranic waste, and HRCQ material should not take place in the Midwest in December, ~~or~~ January, or February.

In the event of a significant delay (e.g., greater than two hours), shippers should notify the affected states of the delay and the carrier's response.

Pre-Departure: Prior to dispatching a shipment, the shipper and driver(s) should agree that weather and road conditions are acceptable. Before making the decision to dispatch a shipment, the shipper will consider current weather conditions, weather forecasts, and projected road conditions at the point of origin and along the entire route. A shipment should not be dispatched if severe weather conditions are forecast to occur anywhere along the route at the time the shipment is expected to be in that area.

For DOE shipments of transuranic waste, state personnel should contact the WIPP Central Monitoring Room to request the opportunity to participate in the pre-departure conference call for each shipment. The decision that acceptable conditions exist should be documented in writing or through entry into a computer database.

En Route: The shipper and/or the carrier will monitor weather conditions while the shipment is in transit. Shipments should not travel when adverse weather or road conditions along routes make travel hazardous. For DOE shipments, ~~states and tribes~~ stakeholders may monitor the status of shipments using TRANSCOM. When severe weather conditions or adverse road conditions occur unexpectedly, law enforcement may divert the shipment to safe parking or may contact the shipper to suggest that the shipment use an alternate route. Safe parking locations will be selected in accordance with this planning guide's section on "Safe Parking." If a state deems it necessary to divert a shipment to an alternate route, the state must coordinate with any other state(s) that will be affected by the route deviation.