

## DOE TRANSPORTATION PROTOCOLS - A STATUS REPORT

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### ABSTRACT

The Department of Energy's (DOE) Senior Executive Transportation Forum has undertaken an initiative to develop a set of DOE-wide transportation protocols which describe the Department's overall transportation policies in such areas as routing, emergency planning, safe parking, and prenotification. A major driver is the need to have more integration and consistency among the various DOE programs who are the major shippers. Internally, DOE can expect some efficiencies by streamlining its activities and adopting more effective approaches used by other organizations. Significant interaction between DOE and the States and Tribes involved in the Department's transportation activities is occurring and will continue until the protocols are issued in the next 12-15 months. The protocols will describe standard approaches for the conduct of DOE's activities regarding shipments of radioactive waste and materials. The protocols will explain the legitimate differences that do exist between programs and the different concerns regarding different types of materials. This paper will present the current state of development of the protocols. Topics under development will be discussed and an estimated schedule to completion will be presented.

### BACKGROUND

The Senior Executive Transportation Forum was established by the Secretary of Energy in January 1998 to coordinate the efforts of Departmental elements involved in the transportation of radioactive materials and waste. One of the issues which the Forum has been addressing is perceived fragmentation in transportation policies and practices. Stakeholders have expressed concern that DOE does not act in a consistent manner in transportation matters. DOE shipping organizations, operating at different sites and under different Program Secretarial Offices, follow a number of different practices for shipping radioactive materials and wastes. To a large degree, these differences may derive from the different hazards associated with different types of materials and wastes, the different applicable regulations, and different state, tribal and local requirements and requests. Still, it is not always apparent why different practices are followed or if such differences are in the best interests of DOE and its stakeholders. A key organizing approach to DOE-wide development of transportation protocols is to first increase consistency

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within material types (spent fuel, low-level waste, transuranic waste, etc.) by mode and then look for opportunities to further extend standardization across material types.

Stakeholders have expressed a desire to deal with a more integrated and consistent DOE. Their expectations for uniformity have been elevated by the activities of highly visible and highly coordinated shipping activities such as those of the Waste Isolation Pilot Project (WIPP), the foreign research reactor spent fuel return program, and the tritium-bearing reactor component efforts. Stakeholders appear receptive to these DOE activities and want other DOE transportation efforts to be performed in a similar fashion.

DOE and contractor transportation personnel, on the other hand, are focused on meeting the Department's transportation needs on a cost-effective basis that is in compliance with all applicable requirements. Stakeholder desires are sometimes viewed as "extra-regulatory requirements" which would add costs without measurable increases in safety. One of the challenges of the protocol efforts has been to try to strike the appropriate balance between stakeholder needs and DOE needs. For example:

Stakeholders want:

- More involvement in decision-making
- More planning information
- DOE to provide emergency response resources

while, DOE interests are to:

- Ship as needed at lowest cost
- Minimize extra-regulatory practices
- Avoid being caught in the middle of State/Tribal/Local conflicts.

### **DOE SHIPPING ACTIVITY**

According to DOE data, in Fiscal Year 1998 DOE made 4,973 off-site shipments of radioactive material (1). Medical and research isotopes comprised 32% of these shipments, primarily by air, while wastes from operations and cleanup activities comprised 31% of DOE's radioactive shipments. As cleanup activities continue, waste shipment volumes are expected to increase. Most DOE shipments are transported by commercial carriers, however, classified shipments are handled by DOE's Transportation Safeguards Division. Also, while some shipments are made by carriers under contract to DOE (or its contractors), many shipments are made under the terms of "tenders" which represent Department-wide, regional, or local negotiated rates for shipping specific materials. Any requirements that the Department might wish to place on carriers would need to be incorporated into the tender or contract negotiations, as well as adopted by DOE internally, in order to be effective.

### **THE TRANSPORTATION PROTOCOL INITIATIVE**

In response to these concerns, the Forum has undertaken an initiative to evaluate the shipping protocols and practices being used throughout the Department, to document them, and, where

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appropriate, to standardize them. Throughout this process, internal and external stakeholder input is being sought and considered. In addition to specific comments solicited on the protocols, DOE has also considered other inputs from groups such as the Environmental Management Advisory Board (2), resolutions of the Western Governors' Association (3), the results of a Site Specific Advisory Board workshop on transportation (4), and documents such as the TEC/WG topic group report on routing (5). DOE is attempting to not only address stakeholder concerns but to also improve the efficiency and effectiveness of its transportation activities.

The following four-phase process is being followed in the protocol initiative:

- **Phase I:** Compile information on current protocols and practices.
- **Phase II:** Analyze the compiled protocol and practice information, including input from stakeholders, to determine where standardization might be appropriate.
- **Phase III:** Identify proposed protocols and practices where DOE considers standardization to be appropriate and desirable.
- **Phase IV:** Evaluate and incorporate stakeholder input and issue a final protocols and practices document.

### **Status of Protocol Development**

Phase I was completed and a set of tables describing current practices was provided to participants at the January 1999 Transportation External Coordinating Working Group (TEC/WG) meeting. Information was collected on 17 topical areas from various organizations within the Department. TEC/WG participants were given the opportunity to provide comments on the compiled information and on the proposed process for subsequent protocol development.

In general, the compilation of DOE-wide information on existing transportation practices was praised by the external stakeholder community. Documenting what exists and laying out comparative information for DOE to begin asking itself questions was viewed as a milestone event. Through this effort, DOE has learned a lot about the various ways its transportation activities are done and how they are perceived by stakeholders.

Comments received on the first three draft protocols released last July (projected shipment planning information, shipment prenotification, and routing), included the following:

- States would like at least three years of lead time to prepare for shipments
- DOE should require certain pieces of planning information be provided on all shipments on a common schedule
- DOE should provide prenotification on spent fuel shipments sooner than the minimum NRC-required postmark
- Routing should follow the WIPP model with a pre-determined set of routes identified and concurred on by states with the carrier required to follow those routes
- Mode selection should be covered by a protocol

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These comments will be considered in the subsequent re-drafting of the protocols.

Phase II is underway, with each protocol topic being examined in detail. The original list of topics has been slightly revised as a result of further analysis and now consists of 19 topics. The following table gives the status of each topic.

**Table I : Status of Protocol Topics**

| <u>Protocol Topic</u>                      | <u>Status</u>  |
|--|--|
| Projected Shipment Planning Information    | Initial draft reviewed and comments received from stakeholders |
| Shipment Prenotification                   | Initial draft reviewed and comments received from stakeholders |
| Routing ( <i>without low-level waste</i> ) | Initial draft reviewed and comments received from stakeholders |
| Transportation Operational Contingencies   | Initial draft in review by stakeholders                        |
| Safe Parking                               | Initial draft in review by stakeholders                        |
| Carrier/ Driver Requirements               | Initial draft in review by stakeholders                        |
| Tracking                                   | Initial draft in review by stakeholders                        |
| Emergency Notification                     | Initial draft in review by stakeholders                        |
| Emergency Response                         | Initial draft in review by stakeholders                        |
| Routing ( <i>with low-level waste</i> )    | Initial draft in review by stakeholders                        |
| Inspection                                 | Preliminary Draft in preparation                               |
| Post-Shipment                              | Preliminary Draft in preparation                               |
| Remediation                                | Preliminary Draft in preparation                               |
| Equipment                                  | Preliminary Draft in preparation                               |
| Training                                   | Preliminary Draft in preparation                               |
| Emergency Planning                         | Preliminary Draft in preparation                               |
| Crisis Communication                       | Preliminary Draft in preparation                               |
| Security                                   | Preliminary Draft in preparation                               |
| Planning                                   | To be drafted  |
| Public Information                         | To be drafted  |

Preliminary draft protocols are being developed by a Protocol Writing Group with broad representation from several headquarters and field office organizations. Drafts are developed and then are presented to a Steering Committee, composed of members of the Forum. Following

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approval of the Steering Committee, preliminary drafts of several protocols have been circulated for internal DOE review and then shared with stakeholders for early reaction. Stakeholder review has been done through conversations with selected stakeholders and through interactions with a Protocol Topic Group which has been established within the TEC/WG. Comments have been received and will be considered in subsequent re-drafting efforts.

### **Future Efforts**

After initial drafts have been completed for each of the topics and they have been reviewed by the Protocol Topic Group, an initial draft will be developed of a protocols document which will cover all of the topics. At that time, the received stakeholder comments will be considered along with any revisions needed to ensure consistency between protocol topics. DOE expects to continue an active dialogue with external stakeholders as we finalize the protocols. Phase III would then be completed when that draft document is released for public comment. It is anticipated that document will be released later this year. A more formal comment and response process will be used on the completed document.

Phase IV efforts will center on responding to comments on the public draft, incorporating necessary revisions, and issuance of a final document. After that, periodic updates may be necessary to accommodate changes in regulations or to cover new topics.

### **CONCLUSION**

The development of transportation protocols that cover the wide variety of DOE radioactive material shipments is a challenging task. There is a great deal of stakeholder interest in transportation that must be taken into account. There are also a variety of driving requirements and differing viewpoints within the Department that must be considered. It is hoped that even in those areas where greater standardization in policies and practices is not achieved, there will be a better understanding, both within and external to the Department, of the reasons for differing approaches. The Senior Executive Transportation Forum has proven to be an effective means for establishing Department-wide integration on transportation issues as we gain consensus on ways to conduct business. The Forum's leadership for the transportation protocol effort should help to contribute to public confidence that DOE shipments will continue to be made in a safe and effective manner while achieving increased consistency in our practices and improving efficiency and effectiveness of operations.

### **REFERENCES**

1. U.S. Department of Energy - National Transportation Program, "DOE Shipping Activity", March 1999.
2. Environmental Management Advisory Board, "Report and Recommendations of the Accelerating Closure Committee, Transportation Subcommittee", October 8, 1998.
3. Western Governors' Association, "Policy Resolution 99 - 014, Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste", June 15, 1999.

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4. Site Specific Advisory Boards Transportation Workshop, "Stakeholder Statements", May 20-22, 1999.
5. "Routing Issues Related to U.S. Department of Energy Radioactive Materials Transportation: Discussion and Recommendations", prepared by the Routing Topic Group of the Transportation External Coordination Working Group, April 1998