

## **PMTS: Packaging Management Tracking System**

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### **INTRODUCTION**

Having over 80 locations that have a need to package and ship materials, especially radioactive materials, creates an opportunity conducive to duplication. And in the packaging arena duplication can mean millions of dollars. Therefore the Department of Energy's Traffic Management Division (TMD) authorized the development of the Packaging Management Tracking System (PMTS) as an integral part of the Automated Transportation Management System (ATMS). PMTS, when fully developed, will provide information on current packaging-related data to ensure packaging readiness, availability, and safety. The clearest objective of this task is, To provide accurate package information that can be made readily accessible to the United States Department of Energy community and identified others in support of programmatic needs.

### **PACKAGING MANAGEMENT TRACKING SYSTEM**

The DOE has approximately 80 facilities throughout the United States that specialize in either scientific research, engineering, technology, production, and/or waste management-activities. These facilities can best be described as Government-Owned, Contractor-Operated (GOCO) sites, and vary in size from very small laboratories to large industrial plant-type facilities. These GOCO's have diverse but somewhat similar needs for the transportation of materials into and/or out of their facilities, therefore they may have similar needs for packaging.

The DOE Transportation Management Division (TMD) has the corporate responsibility to provide a well-managed packaging management program for the safe, efficient, and economical transportation of all DOE-owned materials. To achieve this mission, TMD provides oversight and, when

necessary, resources to assist in ensuring regulatory compliance in the packaging and shipment of DOE-owned materials.

A large part of TMD's responsibility is to develop, administer, and provide policies and guidance concerning department-wide transportation and packaging issues. This responsibility includes general traffic management policies and programs for the packaging and movement of all DOE materials, including radioactive materials, other hazardous materials/substances, and hazardous wastes.

Because there are at least 80 shipping and receiving sites, the challenge encountered by TMD has been the difficulty in managing the packaging needs for such a diverse community. The number of contractors involved, the goals and mission of the individual sites, the diverse location of these facilities (nationwide), and the limited resources available to TMD make it very difficult to track and maintain information needed to create and administer a cost-effective packaging program. Overall, the packaging-management function is very difficult to administer from a corporate perspective without close coordination and the free flow of up-to-date information related to packaging needs and trends. A major factor that limits this ability is the lack of a unified and easily accessible system.

The Package Management Tracking System (PMTS) has been designed to fill this void. It will support sound packaging management, having the right package at the right place and at the right time, in sufficient quantities to support programmatic schedules and goals. PMTS will be incorporated as an integral part of TMD's Automated Transportation Management System (ATMS). ATMS is TMD's system that supports traffic management services at the site level and provides transportation-related information to both the site level and TMD. As a module within the ATMS, PMTS will provide packaging-related information on certified and/or approved packages especially, Type A and Type B packaging. This information is needed to support the programmatic needs of traffic offices throughout the DOE complex.

Baseline requirements for the PMTS system were the following: Must integrate with ATMS; Must be menu driven to a single function; Provide access security through user name/password; Have the ability to download ASCII data in delimited fields; Provide information on locations, availability, maintenance record(s) by package, schedule of usage (past, current, planned), schedule of maintenance and flagging of packages needing maintenance, owner information, custodial information, certification renewal status and notification of when renewal is due; Look-up or search capability (query); Provide reports via hard-copy, online (screen) or in files; Provide online help; Preprogrammed function keys; Online training; Ability to be hosted on multiple operating systems; Ability to track any package uniquely

identified to the system; Point-in-time recovery ability; Journal changes; Informative and easily understood error messages.

This laundry list of requirements is just the basic guidelines for the PMTS system. Although it may seem long and difficult these requirements are needed to make PMTS a viable system. Transporting materials is necessary, and the goal is to ensure that all materials are moved in a safe and regulatory compliant manner. Dealing in an environment where various agencies must certify packages for specific commodities and where the burden for safe packaging is placed on the shipper, it is extremely critical that information be shared to prevent duplication of effort. In an environment of shrinking dollars every effort must be made to maximize the dollars that are provided.

PMTS will be a major step in the direction of maximizing dollars. The system, when fully operational, will include data related to all types of packaging. Type A and Type B packages are one of the areas where the most savings can be realized, not only by avoiding cost in new design, current packages will be used and reused, but also in the maintenance of those packages. As well, avoidance of fines and/or penalties related to recertification. PMTS will be utilized complex-wide, where information can flow freely and will be shared by all. The system will rely on information from the users and will require discipline in updating and maintaining records, but overall the potential for savings is significant.

PMTS can be queried from a variety of informational fields that will assist the user in finding the correct packaging. The system will incorporate RAMPAC data that is currently being utilized by the DOE complex. RAMPAC data has over forty fields of information related to radioactive-type packages. PMTS will query the information based on any one of these fields or any combination of fields. The user will be able to do a general query on one field, then add additional fields one at a time to further narrow the package selection. The same type of information, although not as detailed, can be entered into the PMTS system on any type of other package, such as UN packaging or other tested and/or approved package.

A query will generate information on a specific package such as any applicable certifications, whether that be a Certificate of Compliance from the U.S. Nuclear Regulatory Commission or a U.S. Department of Transportation related approval. The certification referenced will be the most current associated with that package. Once displayed, these documents will be available for retrieval through TMD's FaxBack system. Currently FaxBack can provide these certificates through a dial-up request. When fully operational, PMTS will have an automatic link to FaxBack and provide this information by the mere click of the mouse button. Through queries to the PMTS data base and retrieval of these certificates, the user

can feel fully confident that the correct package has been selected. The query ability and the FaxBack tie-in provide strong support for PMTS.

The specifications for size, weight, and contents will further enable the user to decide whether the specified package will fit their needs. Other data will contain any transport restrictions that may apply to the specific package. These restrictions can include among other things any special handling requirements and any required tie-down or securement specifications.

Having determined that a package exists for use with a specific product from performing an query to PMTS and retrieval, through FaxBack of specifications, certifications and transport restrictions, the system goes further by providing a scheduling system. The scheduling portion will show not only when a specific package is available for use but also its past and scheduled future use. This information is critical in ensuring compatibility. Knowing where a package has been benefits the user in knowing what to expect, such as the possibility of contaminates and how those contaminates may affect receipt, transport, or compatibility with the user's environment. In addition, the user can determine whether the scheduled availability will meet the requirements in his plan. If the package will not meet his needs, alternate packages can be researched.

In addition, the specific number of packages will be provided. This information is critical in the planning for the movement of materials. Plans can be made to ensure sufficient quantities are available. Ownership and/or custodial information provides the user with critical information. This information is needed to begin negotiations for use and any planning needed to secure additional quantities.

The benefits from utilization of the PMTS product are numerous. Those most likely to benefit, besides taxpayers, are packaging engineers and traffic managers. The information provided will assist in planning and executing plans for the movement of DOE-owned materials, especially hazardous materials, including radioactive materials and waste.