

## The Radioactive Material Post Notification (RAMPOST) Data Base\*

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### BACKGROUND

The routing regulations instituted by the U.S. Department of Transportation (DOT) under HM-164 resulted in the definition of Highway Route Controlled Quantities (HRCQ). HRCQs represent what might be termed "significant quantities" of radioactive materials. HRCQs are quantities (or activities) of radioactive material in a single package that exceed 3000 A1 or 3000 A2 magnitudes or 30,000 Ci, whichever is the least. One of the motives in the routing regulations was the institution of "prenotification" of HRCQ shipments to state and local governments through the NRC to expedite the preparedness of local emergency responders in case of transportation accidents involving HRCQ quantities of radioactive materials. Also, as a result of the routing regulations, "postnotification" of HRCQ shipments are made to DOT after the shipments have taken place. It should be noted that NRC considers "prenotification" information as sensitive until the shipment campaign is completed. Information about HRCQ shipments is stored in the RAMPOST data base at Sandia National Laboratories. This work is supported by the Office of Transportation, Emergency Management and Analytical Services of the U.S. Department of Energy. The objective of this presentation is to describe the shipment patterns of HRCQ shipments in the U.S.A.

### U.S. RADIOACTIVE MATERIAL SHIPMENT INFORMATION

There have been only two occasions during which the U.S. has made an attempt to determine the magnitude of radioactive material shipment volume in the U.S. The first survey was in 1975 and was performed by Battelle Pacific Northwest Laboratory, and this information was used to support NUREG-0170. The second survey occurred in the 1981-1983 time frame and was conducted by SRI-International. SRI determined that there were approximately 2.79 million packages shipped each year in approximately 1.96 million annual shipments and involved approximately 8.97 million curies of radioactive material. These totals do not include DOE shipment totals. During the time frame of Ref. 3, 1982-1983, DOE accounted for approximately 5090 shipments involving 31800 packages and 27.3 million curies of radioactive material. DOE's shipment numbers and package numbers represent an insignificant fraction of the total, however, the radioactivity shipped by DOE in a typical year was significant, representing about 75 percent of the annual total of 36 million curies.

The only mechanism that exists at present to make estimates of U.S. radioactive material shipment volume comes from analyzing the HRCQ shipment data that comes from DOT records of the post notifications. This information is stored in the RAMPOST data base that was developed, and is maintained, by Sandia National Laboratories under sponsorship of the DOE Transportation Management Division. While RAMPOST contains information on the "significant" radioactive material shipments, that is, HRCQs, it does not evaluate national radioactive material shipment volume. Such information can be used in transportation environmental risk assessments.

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Tables 1, 2 and 3 summarize the number and kinds of shipments of Highway Route Controlled Quantities of radioactive materials that have been conducted recently.

Table 1 Highway Route Controlled Quantity Shipments By Year

Year	Highway Route Controlled Quantity Shipments
1985	298
1986	183
1987	141
1988	81
1989	79
1990	109
1991	63
1992	58
1993	79
1994	100
1995*	45
* Preliminary Information	

Table 2 DOE Shipments for 1985 - 06/95

Major Shippers	Percent Of Shipments
Savannah River Plant	11%
Cintichem	5%
ORNL	24%
Rockwell	14%
INEL	20%
Other	26%

Table 3 Most Frequent Carriers for Highway Route Controlled Quantities

Carrier	Percent Of Shipments
Tri-State Motor Transit	56%
Triple K Transport	7%
Rumble Transport	3%
Home/McGill Transport	7%
A.J. Mettler Hauling	14%
Other	13%