

REQUEST FOR OMB REVIEW

(Under the Paperwork Reduction Act and Executive Order 12291)

Important — Read instructions (SF-83A) before completing this form. *Submit the required number of copies of SF-83, together with the material for which review is requested to:*

Office of Information and Regulatory Affairs
Office of Management and Budget
Washington, D.C. 20503

1. Department/Agency and Bureau/Office originating request U.S. Nuclear Regulatory Commission	3. Name(s) and telephone number(s) of person(s) who can best answer questions regarding request Don Hopkins (301) 443-5825
2. 6-digit Agency/Bureau number (first part of 11-digit Treasury Account No.) 3 1 5 0	4. 3-digit functional code (last part of 11-digit Treasury Account No.) 2 7 6
5. Title of Information Collection or Rulemaking Survey of Radioactive Material Shipment Data	C. Is this a rulemaking submission under Section 3504(h) of P.L. 96-511? (Check one) 1 <input checked="" type="checkbox"/> No (Section 3507 submission) 2 <input type="checkbox"/> Yes, NPRM. Expected date of publication: _____ 3 <input type="checkbox"/> Yes, final rule. Expected date of publication: _____ Effective date: _____
6. A. Is any information collection (reporting or recordkeeping) involved? (Check one) 1 <input checked="" type="checkbox"/> Yes and proposal is attached for review 2 <input type="checkbox"/> Yes but proposal is not attached — skip to question D. 3 <input type="checkbox"/> No — skip to question D. B. Are the respondents primarily educational agencies or institutions or is the purpose related to Federal education programs? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	D. At what phase of rulemaking is this submission made? (Check one) 1 <input checked="" type="checkbox"/> Not applicable 2 <input type="checkbox"/> Major rule, at NPRM stage 3 <input type="checkbox"/> Major Final rule for which no NPRM was published 4 <input type="checkbox"/> Major Final rule, after publication of NPRM 5 <input type="checkbox"/> Nonmajor rule, at NPRM stage 6 <input type="checkbox"/> Nonmajor rule, at Final stage

COMPLETE SHADED PORTION IF INFORMATION COLLECTION PROPOSAL IS ATTACHED

7. Current (or former) OMB Number N/A Expiration Date	8. Requested Expiration Date 9/30/82	12. Agency report form number(s) N/A 13. Are respondents only Federal agencies? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9. Is proposed information collection listed in the information collection budget? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	10. Will this proposed information collection cause the agency to exceed its information collection budget allowance? (If yes, attach amendment request from agency head.) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	14. Type of request (Check one) 1 <input type="checkbox"/> preliminary plan 2 <input checked="" type="checkbox"/> new (not previously approved or expired more than 6 months ago) 3 <input type="checkbox"/> revision 4 <input type="checkbox"/> extension (adjustment to burden only) 5 <input type="checkbox"/> extension (no change) 6 <input type="checkbox"/> reinstatement (expired within 6 months)
11. Number of report forms submitted for approval 1		

15. <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>a. Approximate size of universe (if sample)</td><td align="center">13,000</td></tr> <tr><td>b. Size of sample</td><td align="center">1,800</td></tr> <tr><td>c. Estimated number of respondents or record keepers per year</td><td align="center">1,100</td></tr> <tr><td>d. Reports annually by each respondent (item 25)</td><td align="center">1</td></tr> <tr><td>e. Total annual responses (item 15c x 15d)</td><td align="center">1,100</td></tr> <tr><td>f. Estimated average number of hours per response</td><td align="center">16.41</td></tr> <tr><td>g. Estimated total hours of annual burden in Fiscal Year (item 15e x 15f)</td><td align="center">18,050</td></tr> </table>	a. Approximate size of universe (if sample)	13,000	b. Size of sample	1,800	c. Estimated number of respondents or record keepers per year	1,100	d. Reports annually by each respondent (item 25)	1	e. Total annual responses (item 15c x 15d)	1,100	f. Estimated average number of hours per response	16.41	g. Estimated total hours of annual burden in Fiscal Year (item 15e x 15f)	18,050	16. Classification of Change in Burden (explain in supporting statement) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th align="center">No. of Responses</th> <th align="center">No. of Reporting Hours</th> <th align="center">Cost to the Public</th> </tr> </thead> <tbody> <tr> <td>a. In inventory</td> <td align="center">N/A</td> <td align="center">N/A</td> <td align="center">\$ N/A</td> </tr> <tr> <td>b. As proposed</td> <td align="center">1,100</td> <td align="center">18,050</td> <td align="center">\$</td> </tr> <tr> <td>c. Difference (b-a)</td> <td></td> <td></td> <td align="center">\$</td> </tr> <tr> <td colspan="4">Explanation of difference (indicate as many as apply)</td> </tr> <tr> <td>Adjustments</td> <td></td> <td></td> <td></td> </tr> <tr> <td>d. Correction-error</td> <td align="center">+</td> <td align="center">+</td> <td align="center">+ \$</td> </tr> <tr> <td>e. Correction-reestimate</td> <td align="center">+</td> <td align="center">+</td> <td align="center">+ \$</td> </tr> <tr> <td>f. Change in use</td> <td align="center">+</td> <td align="center">+</td> <td align="center">+ \$</td> </tr> <tr> <td>Program changes</td> <td></td> <td></td> <td></td> </tr> <tr> <td>g. Increase</td> <td align="center">+ 1,100</td> <td align="center">+ 18,050</td> <td align="center">+ \$</td> </tr> <tr> <td>h. Decrease</td> <td align="center">-</td> <td align="center">-</td> <td align="center">- \$</td> </tr> </tbody> </table>		No. of Responses	No. of Reporting Hours	Cost to the Public	a. In inventory	N/A	N/A	\$ N/A	b. As proposed	1,100	18,050	\$	c. Difference (b-a)			\$	Explanation of difference (indicate as many as apply)				Adjustments				d. Correction-error	+	+	+ \$	e. Correction-reestimate	+	+	+ \$	f. Change in use	+	+	+ \$	Program changes				g. Increase	+ 1,100	+ 18,050	+ \$	h. Decrease	-	-	- \$
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17. Abstract—Needs and Uses (50 words or less)

The NRC, together with the Department of Transportation, establish standards for and regulate safe transportation of radioactive material. Survey of current activity will be conducted to provide United States shipment data to the International Atomic Energy Agency for its world wide environmental risk analysis.

<p>18. Related report form(s) (give OMB number(s), IRCN(s), internal agency report form number(s) or symbol(s))</p> <p style="text-align: center;">N/A</p>	<p>20. Catalog of Federal Domestic Assistance Program Number</p> <p style="text-align: center;">N/A</p> <p>21. Small business or organization <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>19. Type of affected public (Check as many as apply)</p> <p>1 <input type="checkbox"/> individuals or households</p> <p>2 <input type="checkbox"/> state or local governments</p> <p>3 <input type="checkbox"/> farms</p> <p>4 <input checked="" type="checkbox"/> businesses or other institutions (except farms)</p>	<p>22. Type of activity of affected public—indicate 3-digit Standard Industrial Classification (SIC) code(s) (up to 10) — if over 10, check <input type="checkbox"/> Multiple or <input type="checkbox"/> All</p> <p style="text-align: center;">4 8 3 _____</p>
<p>23. Brief description of affected public (e.g., "retail grocery stores," "State education agencies," "households in 50 largest SMSAs")</p> <p style="text-align: center;">Radioactive material shippers</p>	
<p>24. Purpose (Check as many as apply. If more than one, indicate predominant by an asterisk)</p> <p>1 <input type="checkbox"/> application for benefits</p> <p>2 <input type="checkbox"/> program evaluation</p> <p>3 <input type="checkbox"/> general purpose statistics</p> <p>4 <input type="checkbox"/> regulatory or compliance</p> <p>5 <input type="checkbox"/> program planning or management</p> <p>6 <input checked="" type="checkbox"/> research</p>	<p>26. Collection method (Check as many as apply)</p> <p>1 <input checked="" type="checkbox"/> mail self-administered</p> <p>2 <input type="checkbox"/> other self-administered</p> <p>3 <input checked="" type="checkbox"/> telephone interview</p> <p>4 <input type="checkbox"/> personal interview</p> <p>5 <input type="checkbox"/> recordkeeping requirement: Required retention period: _____ years</p> <p>6 <input type="checkbox"/> other—describe: _____</p>
<p>25. Frequency of Use</p> <p>1 <input checked="" type="checkbox"/> Nonrecurring</p> <p style="padding-left: 20px;">Recurring (check as many as apply)</p> <p>2 <input type="checkbox"/> on occasion 6 <input type="checkbox"/> semiannually</p> <p>3 <input type="checkbox"/> weekly 7 <input type="checkbox"/> annually</p> <p>4 <input type="checkbox"/> monthly 8 <input type="checkbox"/> biennially</p> <p>5 <input type="checkbox"/> quarterly 9 <input type="checkbox"/> other—describe: _____</p>	<p>27. Collection agent (Check one)</p> <p>1 <input type="checkbox"/> requesting Department/Agency</p> <p>2 <input type="checkbox"/> other Federal Department/Agency</p> <p>3 <input checked="" type="checkbox"/> private contractor</p> <p>4 <input type="checkbox"/> recordkeeping requirement</p> <p>5 <input type="checkbox"/> other—describe: _____</p>
<p>28. Authority for agency for information collection or rulemaking—indicate statute, regulation, judicial decree, etc. Environmental Protection Act of 1969 Atomic Energy Act of 1954, as amended Energy Reorganization Act of 1974</p>	<p>30. Do you promise confidentiality? (If yes, explain basis for pledge in supporting statement.) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>31. Will the proposed information collection create a new or become part of an existing Privacy Act system of records? (If yes, attach Federal Register notice or proposed draft of notice.) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>32. Cost to Federal Government of information collection or rulemaking \$ <u>675,000</u></p>
<p>29. Respondent's obligation to reply (Check as many as apply)</p> <p>1 <input checked="" type="checkbox"/> voluntary</p> <p>2 <input type="checkbox"/> required to obtain or retain benefit</p> <p>3 <input type="checkbox"/> mandatory—cite statute, not CFR (attach copy of statutory authority)</p>	

COMPLETE ITEMS 33 THRU 35 ONLY IF RULEMAKING SUBMISSION

<p>33. Compliance costs to the public</p> <p>\$ _____</p>	<p>34. Is there a regulatory impact analysis attached?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>35. Is there a statutory or judicial deadline affecting issuance?</p> <p><input type="checkbox"/> Yes. Enter date: _____</p> <p><input type="checkbox"/> No</p>
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CERTIFICATION BY AUTHORIZED OFFICIALS SUBMITTING REQUEST—We certify that the information collection or rulemaking submitted for review is necessary for the proper performance of the agency's functions, that the proposal represents the minimum public burden and Federal cost consistent with need, and is consistent with applicable OMB and agency policy directives. Signature and title of:

<p>APPROVING POLICY OFFICIAL FOR AGENCY</p> <p style="text-align: center;"><i>Patricia G. Norry</i> Patricia G. Norry</p>	<p>DATE</p> <p style="text-align: center;">7-22-82</p>	<p>SUBMITTING OFFICIAL</p> <p style="text-align: center;"><i>R. Stephen Scott</i> R. Stephen Scott</p>	<p>DATE</p> <p style="text-align: center;">7/30/82</p>
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OMB SUPPORTING STATEMENT FOR SURVEY OF
RADIOACTIVE MATERIAL SHIPMENT DATA

Justification

The Nuclear Regulatory Commission, together with the U.S. Department of Transportation, establish standards for and regulate the safe transportation of radioactive material. To evaluate these standards and the effectiveness of the regulatory program, the environmental impacts associated with the standards and with any changes to those standards must be evaluated. Environmental impact evaluations are required under the provisions of the National Environmental Policy Act (Public Law 91-190). The first comprehensive evaluation of the impacts associated with transportation standards was completed in 1977 and issued as "Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes," NUREG-0170, dated December 1977.

That environmental impact evaluation was based on a survey of radioactive material shipments and their safety related characteristics done for NRC in 1975. Subsequent to that survey, changes have occurred in the radioactive material transportation system which could cause significant changes in the associated environmental impacts. Because of a boycott against radioactive material packages by the Airline Pilots Association, many packages of radioactive material formerly carried on passenger aircraft are now carried by truck. In related actions, Congress required that DOT restrict packages of radioactive material carried by passenger aircraft to those associated with research or medical applications, and DOT approved an exemption for a number of carriers to carry more radioactive material packages in sole use cargo aircraft than previously allowed. In addition, although we projected increases in numbers of radioactive material packages in transportation over the years, we do not yet have a benchmark by which to validate those projections.

NRC plans call for the updating of its final environmental statement on transportation (NUREG-0170) starting in FY 1984. Because of the significant changes in the system of transportation for radioactive material since 1975, the existing data base for numbers and radioactivity characteristics of radioactive material shipments is considered inadequate for this purpose, making necessary the new survey.

The primary objective of the survey is to gather information on the numbers and radioactivity characteristics of radioactive material shipments within the United States. A number of approaches, including on-site interviews with licensees, were considered for gathering the necessary information. The survey method was selected as the most cost-effective for obtaining comprehensive and reliable data.

The primary use of the radioactive material shipment data is as input radioactivity data to an environmental impact evaluation. The data will also be used to provide United States shipment data to the International Atomic Energy Agency for its world wide environmental risk analysis. It is expected that the shipment data

will also be used, probably by the Federal Emergency Management Agency (FEMA), as a basis for advising State and local emergency response organizations as to the type of shipments for which emergency response preparations should be made.

The only similar information available is from the 1975 survey, which is now considered inadequate for the primary purpose to be served.

The plans for this survey have been coordinated with representatives, at the federal level, of the Department of Energy, the Department of Transportation, and with FEMA, the major agencies which would work with this type of information.

The respondent burden is directly dependent on radioactive material shipment activity, with the smaller companies normally incurring the lesser burden. A detailed estimate of the respondent burden is included on page 4.

Only one copy of the response is requested.

Description of Survey Plan

1. Description of Potential Respondent Universe

The data collection form will be mailed to a sample of radioactive material shippers. The most current version of NUREG-0020--facilities licensed by NPC--and 26 agreement-state lists will be combined to create the sample frame. From the approximately 5,000 NRC licensees and 8,000 Agreement State licensees, a sample of 1,800 shippers will be selected. Data will be collected from calendar year 1981.

2. Description of Sample Design

All NRC and agreement state shippers will be organized into sampling strata reflecting major industrial/commercial categories which ship radioactive materials. A special sampling stratum will be constructed consisting of the most active shippers of radioactive materials. All companies (400) falling into this active shipper stratum will be included in the sample. Other companies (1,400) will be selected at random.

3. Description of Survey Design

Sampled companies (1,800) will be asked to compile shipping data for a specific time period and submit it on the subject data collection form.

4. Description of Pre-test Activity

The data collection form was pretested with nine companies: at least one company was selected from each of the major industrial/commercial categories. Shipping companies we had previously contacted in our exploratory research phase were selected for the pretest. In addition to the form, the instructions (and cover letter) were examined for possible changes. As a result of the pretest, coding explanations were explained more adequately for field use.

5. Expected Response Rates and Methods to Maximize it

Surveys using the previously described methodology usually attain at least a 60% response rate. In order to maximize the expected response (1100) we are using these procedures:

- a. A telephone call to locate the actual person filling out the form (the ability of the form to be directly sent to the appropriate respondent accounts for non-response in many surveys involving major companies).
- b. A follow-up reminder postcard.
- c. A follow-up phone call to encourage response among the most active shippers.
- d. A second mailing to all other sampled companies.

Response in the context of this study involves not just numbers of companies responding, but the ability to obtain data from the most active shippers of radioactive materials. Our most extensive efforts to obtain response will be with respect to the most active shippers.

6. Disposition of Information Containing Organizational Identifiers

Each shipping company in the survey is assigned an identification number used only for the purpose of keeping track of completed forms. The data are entered into the computer using these identification numbers and no company names. After the survey is completed, the master list of names and identification numbers is destroyed. This procedure ensures that no data in the computerized data bank will be identified by company names.

Tabulation and Publication Plans

Primary use of the data base will be made by Sandia National Laboratories, Transportation Technology Center (the prime contractor). Sandia will conduct risk assessment and other relevant analyses and accordingly produce reports of their findings. SRI International will produce a summary substantive report modeled after the Batelle National Laboratories 1975 report, NU'REG-0073. This report will include summary statistics such as the estimated number of packages shipped, the major radionuclides shipped, package characteristics of the major radionuclides shipped, and major transport modes of packages shipped. In addition, SRI International will produce a technical report specifying the sampling, data collection and analysis procedures used in the project. Further, SRI International will submit a data base to Sandia National Laboratory on computer readable media and instructions on its use.

Consultations Outside the Agency

U.S. Department of Energy
U.S. Department of Energy
U.S. Department of Transportation

Ms. Kathleen A. Carlson
Mr. Frank P. Falci
Mr. Richard R. Rawl

U.S. Department of Transportation
Federal Emergency Management Agency

Ms. Nancy Simmons
Mr. Vern Wingert

Estimate of Compliance Burden

The total respondent burden would be the sum of the time for personnel at each sampled company to compile the necessary shipping data, review the form and instructions, and to complete the form. The respondent burden varies depending upon whether the company is a major shipper of radioactive materials or not. Costs are based on the assumption that professional and clerical personnel will be equally involved.

The largest component of time and cost will be the actual coding of data from shipping records onto the form. We estimate a range of 16-80 hours for major shippers since major shippers can be defined either as a company that makes a few shipments of high level radioactive material (16 hours estimated coding time), or many shipments of lower level radioactive material (80 hours estimated coding time). The average value--32 hours--assumes that 75% of major shippers require 16 hours and 25% require 80 hours. The average value of 6 hours for other shippers is based on similar calculations.

The total burden on the selected sample is estimated at 18,050 hours: initial phone contact with four hundred (400) major shippers x 1/2 hour (200) and fourteen hundred (1400) other shippers x 1/4 hour (350); plus three hundred (300) major shipper respondents x 37 hours (11,100); plus eight hundred (800) other shipper respondents x 8 hours (6400).

Sensitive Questions

Not applicable to this data collection.

Estimate of Cost to Federal Government

The estimated cost to develop the survey form, mailing cost, contractor time, and analysis of findings is estimated at \$675K.

SURVEY OF SOURCE, HANDLING AND SHIPMENT OF RADIOACTIVE MATERIAL (Continuation)

3. CITY (origin of shipment)

NOTE: This continuation page may be repeated as necessary to complete this survey.

4. U.S. SHIPMENT ID	5. SHIPMENT DATE		6. DESTINATION		7. DISTANCE TRAVELED IN U.S.	8. PRIMARY MODE OF TRANSPORT IN U.S.	9. SHIPMENT ACTIVITY		10. SHIPMENT WITHIN	11. SHIPMENT NUMBER OF PACKAGES	12. RADIOACTIVE SYMBOLOGY AND WEIGHT		13. PACKAGE ACTIVITY		14. PACKAGE TRANSPORTATION INDEX		15. PHYSICAL UNIT	16. PACKAGE TYPE		17. PACKAGE LABEL CATEGORY		
	MONTH	DAY	COUNTRY	CITY			STATE	AMOUNT			UNIT	TYPE	AMOUNT	UNIT	TYPE	CLASS		TYPE	CLASS			
																					FOREIGN	U.S.

by using the codes previously
 complete this survey for all intra-city radioactive material shipments, except for defense related material because they are classified, as well as shipments to intermediate sites. For waste shipments that go directly to Barnwell, Richland, or
 ready burial sites, reproduce the waste shipment papers that correspond to the same time period as that designated for the survey form, and send the copies along with this survey to the address cited below. on the form.

ITEMS 1 through 5 are self-explanatory.

- SHIPMENT DATA (1)
- CONTAINER - Check this column only if the shipment is an overpack or a shipment to more than one customer at a single destination.
 - SHIPPING RATE - Self-explanatory.
 - DESTINATION
 FOREIGN COUNTRY - Complete only if the shipment has a foreign country destination, use the abbreviations provided below. If an abbreviation for a country not appearing on the listing is used, spell the country out at the top of the form. Indicate the U. S. port of exit in the columns "U. S. DESTINATION OR PORT OF EXIT, CITY, STATE," using the two-letter state codes listed below.
 UNITED STATES DESTINATION OR PORT OF EXIT - Put the address of the shipping papers if the items are being delivered within the U. S.; spell the city out, and use the two-letter state code from the list below. If the shipment is to a foreign country, use the U. S. port of exit.

ABBREVIATIONS FOR FOREIGN COUNTRIES				TWO-LETTER STATE CODES							
AF	Afghanistan	FTM	Finland	LEB	Lebanon	SEY	Seychells	AL	Alabama	MT	Montana
AG	Albania	FRA	France	LIE	Liberia	SLN	Sierra Leone	AK	Alaska	NE	Nebraska
AI	Algeria	GAB	Gabon	LBY	Libyan Arab Republic	SING	Singapore	AZ	Arizona	NV	Nevada
AR	Argentina	GER	Germany	REP	Republic	SAR	South Africa	AR	Arkansas	NH	New Hampshire
AU	Australia	DDR	Democratic Republic of Germany	LTC	Liechtenstein	SPN	Spain	CA	California	NJ	New Jersey
AT	Austria	LUX	Luxembourg	MDR	Madagascar	SLR	Sri Lanka	CO	Colorado	WA	Washington
BD	Bangladesh	MDR	Madagascar	MLA	Malaysia	SUD	Sudan	CT	Connecticut	NY	New York
BE	Belgium	GER	Germany, Federal Republic of	MAL	Malta	SWD	Sweden	DE	Delaware	NC	North Carolina
BR	Brazil	GRC	Greece	MEX	Mexico	SWI	Switzerland	DC	District of Columbia	ND	North Dakota
BG	Bulgaria	GU	Guatemala	MOH	Mongolia	SYR	Syrian Arab Republic	FL	Florida	OH	Ohio
BM	Burma	HA	Haiti	HRG	Hong Kong	TAN	Tanzania	GA	Georgia	OR	Oregon
CA	Canada	HUN	Hungary	ICE	Iceland	THA	Thailand	HI	Hawaii	PA	Pennsylvania
CH	China	IND	India	ISR	Israel	TUN	Tunisia	ID	Idaho	RI	Rhode Island
CL	Chile	INDO	Indonesia	ITA	Italy	UGA	Uganda	IL	Illinois	SC	South Carolina
CM	Cameroon	IRN	Iran	JAM	Jamaica	USSR	Union of Soviet Socialist Republics	IN	Indiana	SD	South Dakota
CU	Cuba	IRQ	Iraq	JPN	Japan	YUG	Yugoslavia	IA	Iowa	TN	Tennessee
CY	Cyprus	IRL	Ireland	KOR	Korea, Republic of	ZAI	Zaire, Republic of	KS	Kansas	TX	Texas
CS	Czechoslovak Socialist Republic	ISR	Israel	KWT	Kuwait	ZIM	Zimbabwe	LA	Louisiana	UT	Utah
DK	Denmark	ITA	Italy	QAT	Qatar			MA	Maine	VT	Vermont
EE	Estonia	JOR	Jordan	ROM	Romania			MD	Maryland	VA	Virginia
EG	Egypt, Arab Republic of	KHM	Kampuchea	SAR	Saudi Arabia			MA	Massachusetts	WV	West Virginia
ES	Spain	KEN	Kenya	SEN	Senegal			MI	Michigan	WI	Wisconsin
ET	Ethiopia	KOR	Korea, Republic of					MO	Missouri	WY	Wyoming

d. DISTANCE TRAVELED - Complete this column only for intra-city distances and remote locations. Do not complete this column for city to city shipments.

- PRIMARY TRANSPORT MODE - Use the two letter code provided below. (When primary mode is by rail, write in "RR" and then the specific rail company, e.g., RR So. Pac., RR Santa Fe, RR Conrail) because an algorithm will be used to calculate distance traveled through specific routes.
 AT Air IH Inland Waterways SE Sea (ship) OT Other
 HH Highway RR Rail* IS Mail UN Unknown
- SOLE USE - Check (v) this column if transportation mode is a sole source vehicle.

- SHIPMENT ACTIVITY - Measure shipment radioactivity, not weight (as a cross-reference, the SHIPPING ACTIVITY in this column should equal the total of values written under PACKAGE ACTIVITY, for all packages in a shipment). When the units are in microcuries, circle the symbol so it will not be mistaken for millicuries.
 uCi Microcurie(s) Ci Curie(s) mCi Millicurie(s) g Gram(s)
- SHIPMENT TRANSPORTATION INDEX - Measure the transportation index (T.I.), and complete the column provided below. If the shipment T.I. is unavailable, attach a note to the returned survey indicating why it is not available.
- NUMBER OF PACKAGES - The number of packages should coincide with the number of lines of package data, e.g., if the shipment "NUMBER OF PACKAGES" equals 8, then there should be 8 lines of data under "PACKAGE DATA," one for each package.

- PACKAGE DATA
 - RADIONUCLIDE - List the symbol first (no proper names), and then the atomic weight of each radionuclide shipped, all other ways are unacceptable. (Examples I 125, Pu 238, etc.) If symbol and weight are unknown, leave the column blank.
 TYPE - Complete this column by using one of the codes listed below, if the radionuclide does not fall within one of the categories cited, leave "TYPE" blank. "EC" refers only to those containers with residue that requires radioactive material shipping papers to be completed.
 *EC Empty Container (with residue) FF Fresh Fuel MC Mixed Corrosion Products
 MF Mixed Fission Products SF Spent or Irradiated Fuel SS Sealed Sources
 WA Waste (e.g., laundry)
 - CORE PACKAGE ACTIVITY - AMOUNT, provide number of units. UNITS, abbreviate: uCi Microcurie(s)
 Ci Curie(s) mCi Millicurie(s) g Gram(s)
 - PACKAGE TRANSPORTATION INDEX - The TI measurement for each specific package.
 - TRANSPORT GROUP - Use Roman numerals I through VII, or SP - Special Form.
 - PHYSICAL FORM - Use one of the following codes:
 L Liquid Form SM Solid, Monolithic MC Mixed Corrosion Products
 SD Solid Dispersible SE Solid, Encapsulated SP Special Form

- PACKAGE - Use the following codes:
 TYPE
 SM Small/Limited Quantity B Type B W Non-Fissile/Exempt 2 Fissile II
 LSA Low Specific Activity LQ Type B Large Quantity 1 Fissile I 3 Fissile III
 A Type A E Exempt

- LABEL CATEGORY - Use one of the following codes: E Exempt W1 White I Y2 Yellow II. Y3 Yellow III
- END USE - Use the following codes which indicate final expected end use. If the product shipped is in an intermediate stage of processing, code the "end use" of the final product when you know it, if known, otherwise if unknown, code the column "UN"
 IN Other Industrial; well-logging sources, industrial gauges, miscellaneous industrial uses
 IR Industrial Radiography
 MD Medical; hospitals, doctors, sources for human use
 PF Power; fuel rods, pellets, fresh fuel
 RD Research and development/academic; sources for teaching/training/education, samples, exploration
 WA Waste; waste for disposal, uniforms for cleaning
 OT Other; dial paint, smoke detectors, civil defense (when known)
 UN Unknown

SURVEY OF ~~SHIPPED~~ PACKAGE AND SHIPMENT OF
RADIOACTIVE MATERIAL

DEFINITIONS - The following are the standard definitions used to organize data from shipping papers onto the questionnaire.

SHIPMENT - A customer order of one or more packages being shipped at one point in time from a single point of origin to a single destination (e.g., Company X in Chicago, IL sends five packages to Company C in Gore, OK).

PACKAGE - Radioactive material shipped to a customer in a single box, drum, can or cylinder.

COMBINED PACKAGE - More than one shipment to one destination. These data are used only if you do not have shipment data (e.g., Company X in Chicago, IL sends three packages in one shipment to San Francisco, CA with one package going to Company A and two packages going to Company B).

INTRA-CITY - All shipments where the origin and destination are in the same city.

REMOTE LOCATION - Trips where radioactive material located in equipment is used at a remote site and then returned to the home office or base of operation; e.g., well logging firms take detection equipment to a site where they are digging a well; it is used at the site then returned to the base of operation, where it may be sent to another location, used, and again returned to the base of operation.

TRANSPORTATION INDEX (T.I.) - The measured dose rate of radiation 3 feet from the package or shipment. (When shipments consist of more than one package, the shipment, and not each package is measured.)