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Data Package Format for Certified TRU Waste for the Waste Isolation Pilot Plant

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DATA PACKAGE FORMAT FOR CERTIFIED TRANSURANIC WASTE FOR THE WASTE ISOLATION PILOT PLANT

JANUARY 1989

WESTINGHOUSE ELECTRIC CORPORATION
WASTE ISOLATION PILOT PLANT
MANAGEMENT AND OPERATING CONTRACTOR

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1.0 INTRODUCTION

WIPP-DOE-157, "Data Package Format for Certified Transuranic Waste for the Waste Isolation Pilot Plant (WIPP)," specifies the arrangement of data which are required to be reported to the WIPP for transuranic (TRU) waste to be received. These instructions have been prepared as a reference guide for those personnel responsible for the transmission of the data package to the WIPP. For clarification or further information regarding the requirements, see Reference 1, WIPP-DOE-069, current revision, "TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant."

For those sites having automated data processing systems available for use, it should be understood that the shipper's computer system will be used to place the information into the specified format for transmittal. The method of input will, of course, depend upon the particular system being used. Prior to shipment, the shipper's computer system must retrieve the required information for all the packages in that shipment and write the information to an IBM or IBM-compatible personal computer in the data package format (see Section 5). The data package will then be transmitted in ASCII format over the specified communications system to the WIPP Waste Information System (WWIS) using RLINK, which will be furnished by WIPP. Therefore, these instructions are primarily for use by data processing personnel to aid them in programming the system to provide the transmittal information in the data package format. The method to input the data into the shipper's computer system should be determined through a joint effort between the waste generator/shipper and the data processing personnel.

The WWIS was developed using NOMAD2 and resides on a mainframe computer operated by EG&G Idaho, Inc., at the Idaho National Engineering Laboratory.

2.0 SHIPMENT DATA

The shipper shall provide the shipment data described in Section 2 in the format specified in Tables 1 and 2 for each shipment of TRU waste to WIPP. A shipment is defined as one railcar or truck. File format and transmission are discussed in Section 5.

2.1 Shipment Number

The shipper shall assign a unique shipment number to each shipment. The shipment number consists of the two-letter shipping site identification code specified in Table 2, followed by the last two digits of the year of shipment to WIPP and the next consecutive four-digit shipment number for the site.

Example: Enter Rocky Flats shipment 5 in 1991

RF910005

2.2 Shipment Date

The six-number shipment date is entered in YYMMDD format.

Example: Enter a May 12, 1991, shipment date.

910512

2.3 Vehicle Type

The vehicle type is either "R" for railcar or "T" for truck.

Example: Enter vehicle type for a truck shipment.

T

2.4 Waste Type

The waste type is either "CH" for contact-handled TRU waste or "RH" for remote-handled TRU waste.

Example: Enter waste type for a shipment of CH TRU.

CH

2.5 Shipment Certification Date

The shipment certification date is the date when the entire shipment was certified for shipment to WIPP, as opposed to the dates of certification for the individual waste packages. The date is entered in YYMMDD sequence.

Example: Enter a shipment certification date of June 12, 1991.

910612

2.6 TRUPACT APC Certifier

The name of the official who certified that the TRUPACT Approved Payload Compliance (APC) requirements were met for every TRUPACT containing waste in that shipment shall be entered as follows: last name plus first and (if available) middle initials. This is a 25 character field. If TRUPACTs are not being used in this shipment enter "NONE".

Example: Enter A.G. Evans as TRUPACT APC certifier.

EVANS AG

3.0 WASTE PACKAGE DATA

The shipper shall provide the waste package data described in Section 3 in the format specified in Table 3 for each waste package in each shipment.

3.1 TRUPACT/Cask Number

For each waste package, the shipper shall provide the three-character alphanumeric number of the TRUPACT, cask, or other Type B shipping container used to transport the shipment. If the Type B shipping container has a serial number longer than three characters, enter the first three as the TRUPACT/Cask Number, and enter the entire serial number in the Additional Data field. If the TRUPACT or cask is bar coded, the barcode and the TRUPACT numbers will be identical.

Example: Enter TRUPACT 201.

201

3.2 Package Assembly Number

For each CH TRU waste package which is shipped in a package assembly (e.g., seven pack), the shipper shall provide the unique package assembly number. It will consist of the two-letter site identification code listed in Table 2 followed by the last two digits of the year and the four-digit package assembly number.

If the waste package is not a package assembly, the shipper will leave this field blank.

When the interim storage site (rather than the generating site) packages drums into a package assembly, the interim storage site assigns the package assembly number.

Example: Enter INEL package assembly 15 for 1991

ID910015

3.3 Package ID Number

Each waste package shall have a unique package identification number. It will consist of the two-letter site identification code listed in Table 2 followed by the eleven-character (maximum) alphanumeric package number.

If a waste package is bar coded, the barcode and waste package identification numbers will be identical.

Example: For RF-generated waste, enter the package ID number for drum 74120302011.

RF74120302011

3.4 Internal RH TRU Container

The shipper shall indicate the waste containers, if any, internal to the RH canister. This parameter will be used to check the nuclear material loading of the canister. If the internal containers are 30-gal. drums, enter 1; if 55-gal. drums, enter 2; otherwise enter 0. For CH TRU, enter 0.

Example: Enter for 55-gal. drums as internal containers.

2

3.5 Container Code

A three-digit container code shall be entered to identify the type of container or RH canister used for this package. The codes listed in Table 4 are the containers currently approved for use. For Type A packaging not listed in Table 4, contact the WWIS Data Administrator (505-885-8883) at WIPP for

assignment of a container code prior to shipping the unlisted Type A packaging to WIPP.

Example: Enter container code for a 55-gal. DOT 17C drum.

001

3.6 Closure Date

The shipper shall provide the date when the waste package was closed in YYMMDD format.

Example: Enter a closure date of July 12, 1991.

910712

3.7 Weight

Each waste package shall be weighed, and the gross weight of the waste package (in kilograms) shall be entered using scientific notation. It must be in the format 9.9E+99.

Example: Enter a weight of 537 kg.

5.4E+02

3.8 Surface Dose Rate

The maximum surface dose rate reading, including the neutron contribution, (in mrem/hr) for the waste package shall be entered to two significant figures using scientific notation. It must be in the format 9.9E+99.

Example: Enter a surface dose rate of 18 mrem/hr.

1.8E+01

3.9 Neutron Contribution

The neutron contribution to the maximum surface dose rate (in mrem/hr) shall be entered if it exceeds the reportable limits as specified in WIPP-DOE-069. It shall be entered to two significant figures using scientific notation. It must be in the format 9.9E+99. If the neutron contribution is less than the reportable limit, leave the field blank.

Example: Enter a neutron contribution of 65 mrem/hr.

6.5E+01

3.10 Organic Materials Weight

The weight (in kilograms) of organic materials in the CH TRU waste package shall be entered to two significant figures using scientific notation. It must be in the format 9.9E+99. If no organic material is present, or if it is an RH TRU waste package, leave the field blank.

Example: Enter an organic weight of 47 kg.

4.7E+01

3.11 Organic Materials Volume Percent

The percentage of the volume of the waste package occupied by the organic materials, estimated to the nearest 10%, shall be entered as a three-digit number. For RH TRU, or if CH TRU estimate to the nearest 10% is 0, leave the field blank.

Example: Enter on organic materials volume percent of 22.

020

3.12 Thermal Power

The total thermal generating capacity (in watts) of the waste package must be entered for all RH TRU and for CH TRU if the thermal power density exceeds the reportable limit as specified in WIPP-DOE-069. It shall be entered to two significant figures using scientific notation. It must be in the format 9.9E+99. If the thermal power is less than the reportable limit for CH TRU, leave the field blank. The generator or shipper may use the values in Table 5 which is a listing of the thermal power of selected TRU radionuclides and mixtures.

Example: Enter a thermal generating capacity of 8.3 W.

8.3E+00

3.13 Content Code

A content code shall be used to describe the contents of the waste package. These content codes will be prepared by each site and stated in the certification plan. The content code will be a three-character code.

Example: Enter a content code of 804

804

3.14 Pu-239 Fissile Gram Equivalent

The Pu-239 fissile gram equivalent content of the waste package must be reported. It must be entered using scientific notation in the format 9.999E+99.

Example: Enter Pu-239 fissile gram equivalent of 125.5 g.

1.255E+02

3.15 Total Alpha Activity

The total alpha activity (in curies) for the contact-handled TRU waste package must be entered to two significant figures using scientific notation in the format 9.9E+99. Enter 0.0E+00 for remote-handled TRU.

Example: Enter total alpha activity of 17 Ci.

1.7E+01

3.16 PE-Ci

The maximum PE-Ci contained in the waste package shall be entered to two significant figures using scientific notation in the format 9.9E+99.

Example: Enter a PE-Ci content of 9.5 PE-Ci.

9.5E+00

3.17 Hazardous Material Data

The three hazardous material fields shall be entered from zero to fourteen times.

a. Hazardous Material ID Code. Hazardous materials shall be identified by entering the four-character alphanumeric identification code for the hazardous material present in the package. Neutralized corrosives do not require identification. The codes can be found in 40 CFR 261, Subparts C and D. If no hazardous material is present, leave the field blank.

Example: Enter identification code mercury

D009

b. Hazardous Material Quantity. Hazardous material quantity (in liters or grams) shall be entered to two significant figures using scientific notation in format 9.9E+99. If no hazardous material is present, leave the field blank.

Example: Enter 7.2 g of the material.

7.2 E+00

c. Hazardous Material Quantity Units. The units for hazardous material quantity shall be entered as L for liters, G for grams, or blank for none.

Example: Enter units for 7.2E+00 grams of material.

G

3.18 Waste Package Certification Date

The date when the certifying official signed the certification statement for this package shall be entered in YYMMDD format. In the case of a transshipment, the date that will be entered is the date of the original certification for this package as specified in WIPP-DOE-069.

Example: Enter an October 12, 1992, package certification date.

921012

3.19 Additional Data

This 35-character alphanumeric field is a free field for the shipper to enter any additional information deemed useful or necessary for WIPP. If this field is not needed for given waste package, leave it blank.

3.20 Certifying Site

The site where the waste package was certified shall be identified by the two-character site code. See Table 2 for site codes. WIPP needs this

information for use (1) with the name of the official who certified the waste package (Section 3.21) and (2) with the content code to ensure that unique content codes are available for reporting. Thus, if two sites have an identical content code, WIPP can report on them separately by concatenating with the certifying site code (e.g., ID804 and RF804).

Example: Enter Rocky Flats as certifying site.

RF

3.21 Certifying Official's Name

The name of the official who certified the waste package shall be entered as follows: last name plus first and (if available) middle initials. This is a 25-character field.

Example: Enter George S. Marshall's name as certifying official.

MARSHALL GS

3.22 WAC Exception Number

If a shipper has been granted an exception to the WAC for a waste package, the WAC exception number shall be entered in the data package. The format of this field is the two-character site code plus the last two numbers of the year the request was made plus a sequential number (beginning with one each year).

3.23 Gas Generation

The WWIS contains a field for reporting gas generation or gas generation rate if needed in the future. It is designed as a seven-character number to be reported in scientific notation in the format 9.9E+99. This field is part of the data package file structure, but it shall be left blank at present.

3.24 Radionuclide Data

The three radionuclide data fields shall be entered from 1 to 25 times. Radionuclides to be reported may be individual radionuclides, standard mixtures (e.g., Pu-52), or mixtures with unspecified weight percents and radionuclides [e.g., mixed activation products (MAP) and mixed fission products (MFP)]. WWIS contains a look-up table of standard mixtures and the weight percentages of the constituent radionuclides (as currently reported to the Idaho National Engineering Laboratory) for use in calculations. Consequently, if a site wishes to report a new mixture, or if the weight percentages of constituent radionuclides change, it will be necessary to notify WIPP in advance. If a metastable radionuclide is being reported, indicate it by an "M" as the last character of the radionuclide symbol.

a. Radionuclide Symbol. From 1 to 25 radionuclides shall be reported for each waste package. The radionuclide symbol is a seven-character field.

Example: Enter the radionuclide symbol for plutonium-239.

PU-239

b. Radionuclide Quantity. Radionuclide quantity shall be entered in scientific notation in the format 9.999E+99.

Example: Enter radionuclide quantity of 10.

1.000E+01

c. Radionuclide Units. Radionuclide units of measure shall be reported as "G" for grams or "C" for curies. Units for standard mixtures shall be reported in grams and MAP or MFP in curies.

Example: Enter the unit grams

G

4.0 DUNNAGE IN SHIPMENTS

If an empty drum is used as dunnage to complete a seven-pack in a shipment to WIPP, the drum shall be labeled (1) "EMPTY" or "DUNNAGE" and (2) with a package ID number as required in Section 3.3. The empty drum shall be reported by package ID number in the data package. Wherever possible, actual data shall be reported for a dunnage drum. In fields where there are no values to report because the drum is empty, report zeros or leave the fields blank as allowed for that field in Section 3 of this document. Enter zero for the content code, the shipping site ID for the certification site, "NONE" for the certifying official's name, shipment date for both the certification data and closure date, weight of the empty drum for the package weight, "EMPTY" for the radionuclide symbol, and either G or C for the radionuclide units of measure.

If a package assembly (e.g., seven pack) of empty drums is shipped as dunnage to fill a TRUPACT, label the drums as "EMPTY" or "DUNNAGE," but do not label them with package ID numbers or include them in the data package.

5.0 PREPARATION AND TRANSMISSION OF DATA TO THE WWIS

The Data Administrator at WIPP will be the point of contact between the shippers and EG&G Idaho, which operates the host computer where the WWIS resides. Shippers will contact the Data Administrator to obtain a password and ID to transmit data to the WWIS.

In the event a shipper encounters problems with data transmittal, deletion, or editing in the WWIS, contact one of the Data Administrators. Do not contact EG&G Idaho directly. The user may contact User Services at EG&G Idaho directly only if the keyboard/terminal locks up or is stuck in an X WAIT state so that they can recycle and release the user.

The shipper must format the data package as described in Section 5.1, convert it to ASCII, and transmit it to the host computer via IBM or IBM-compatible personal computer (PC). WIPP will provide the RLINK communications software, menus, and Category 4 Users' Manuals to the shipping sites. The shipper must be able to retransmit the data package for 30 days if necessary to recreate the data lost since the most recent backup in the event of a mainframe failure.

5.1 Record and File Format

Table 6 shows the record and file format for shippers to use in transmitting the data package to the host computer. Each record is 200 bytes long and begins with a field identifying the record type. Record types to enter are the following: shipment "S", package "P", hazardous "H", and radionuclide "R". Empty fields and unused bytes in a record are filled with blanks. The sequential file will contain one shipment record, 1-42 package records, 0-1 hazardous records per waste package, and 1-3 radionuclide records per waste package, without delimiters or spaces between 200-byte records. After a package record, provide the associated radionuclide record(s) and hazardous record before the next package record. If fewer than three radionuclide records are needed, or if no hazardous record is needed, omit the unneeded records, and proceed to the next package record.

5.2 Transmission of Data

The user at the shipping site will log on and transmit the data package as described in the Category 4 WWIS Users' Manual. Based on the error report returned to the shipper's printer by the host computer, determine whether all records in the data package passed the WWIS edit and range checks. In accordance with the site's procedures, the authorized person will determine the correct data and modify rejected records accordingly until the data package passes the reedit or delete the data package.

> Note: If the shipper is having problems getting data to pass the edit and range checks, the WWIS Data Administrators can help the shipper. However, because of their assigned security category, they cannot change the shipper's data in the Temporary Database.

If it is necessary to change a shipment number, package ID number, assembly number, WAC exception number, or other protected field, it will be necessary to delete the entire data package, change the data at the shipping site, and retransmit the data package.

When the data package has passed all edit and range checks and the shipment date and shipment certification date are actual, not just predicted, the shipment is considered to be complete. Then the shipper must change the shipment ready field on the shipment screen to "Y." If the entire data package has passed the edit and range checks, the "Y" will be accepted, and the shipper will be denied all further access to that data package. Otherwise, the shipper will have to resolve the error messages before the "Y" will be accepted.

The WWIS database to which the shipper transmits the data package is a shared database. Several shippers may be logged on simultaneously, but no shipper will have access to another shipper's data. In addition to being able to access a data package record by record via menu options for shipment database, rejected package database, or accepted package database, the shipper also will have two report options: the shipment summary and the package data (by shipment).

5.3 Amending Data

If data in the data package require modification any time after the shipment ready field has been set to "Y," the shipper must call the Data Administrators and identify all required changes and the reasons why those changes are necessary. The Data Administrators will then transfer the shipment to the production database (if this has not been done) and change the data, identifying the reasons for changes. The WWIS audit database tracks all additions, deletions, and changes to the production database and the reasons given for those changes.

6.0 REFERENCES

1. WIPP-DOE-069, current revision, TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant.

2. RHO-RE-MA-7, User's Manual for Remote-Handled Transuranic Waste Container, September 1984.

TABLE 1. SHIPMENT/TRANSPORTATION DATA FIELD

Variable Name	Format	Limits
Shipment Number	AAYY9999	Enter 2-letter shipper site code, last 2 digits of the year, and 4-digit shipment number.
Shipment Date	YYMMDD	Enter last 2 digits of the year, 2-digit month, and 2-digit day of the month.
Vehicle Type	A	Enter "R" for rail or "T" for truck.
Waste Type	AA	Enter "CH" for contact handled or "RH" for remote handled.
Shipment Certification Date	YYMMDD	Enter the last 2 digits of the year, 2-digit month, and 2-digit day of the month when the shipment was certified for shipment to WIPP.
TRUPACT APC Certifier	(25A)	Enter last name and first and (if available) middle initials of official certifying that TRUPACT Approved Payload Compliance (APC) requirements were met for the shipment. Enter "NONE" for RH shipments.

TABLE 2. GENERATOR/SHIPPER/CERTIFIER SITE IDENTIFICATION CODES

Site Name	Site Identifier Code
Argonne National Laboratory (East)	AE
Argonne National Laboratory West	AW
Battelle - Pacific Northwest Laboratory	BP
Hanford (small offsite generators shipping for interim storage)	HF
Idaho National Engineering Laboratory	ID
Los Alamos National Laboratory	LA
Lawrence Livermore National Laboratory	LL
Mound	MD
Nevada Test Site	NT
Oak Ridge National Laboratory	OR
Rocky Flats Plant	RF
Richland Hanford	RH
Savannah River Plant and Laboratory	SR
Waste Isolation Pilot Plant (WIPP)	WI

Note: This list will be expanded if other generator/shipper/certifier sites are authorized to ship TRU waste to WIPP.

TABLE 3. WASTE PACKAGE DATA FIELDS

Variable Name	Format	Limits
TRUPACT/Cask Number	(3X)	Enter 3-character alphanumeric number of the TRUPACT, cask, or other Type B container used to transport the shipment.
Package Assembly ID Number	AAYY9999	Enter 2-letter site ID code, last 2 digits of the year, and 4-digit package assembly number. If a package assembly is not used, leave the field blank.
Package ID Number	AAXXXXXXXXXXX	Enter 2-letter site identifier code followed by a maximum 11-character ID for the individual waste package.
Internal RH TRU Container	9	Enter code for internal containers placed in the RH canister: 0 for none, 1 for 30-gal. drum, and 2 for 55-gal. drum. For CH TRU, enter 0.
Container Code	999	Enter WIPP-assigned numerical code for approved TRU containers and RH canisters.
Closure Date	YYMMDD	Enter last 2 digits of the year, 2-digit month, and 2-digit day of the month.

TABLE 3. WASTE PACKAGE DATA FIELDS (cont'd)

Variable Name	Format	Limits
Weight	9.9E+99	Enter in scientific notation the weight in kg of the waste package.
Surface Dose Rate	9.9E+99	Enter in scientific notation the total surface dose rate in mrem/hr.
Neutron Component	9.9E+99	Enter in scientific notation the neutron surface dose rate in mrem/hr if it exceeds the reportable limit specified in WIPP-DOE-069; otherwise leave the field blank.
Organic Materials Weight	9.9E+99	Enter in scientific notation the weight in kg of organic materials in the CH TRU waste. For RH TRU, or if CH TRU contains no organic materials, leave the field blank.
Organic Materials Volume Percent	999	Enter the volume percent of organic materials per volume of CH TRU waste. For RH TRU, or if CH TRU estimate to nearest 10% is 0, leave the field blank.

TABLE 3. WASTE PACKAGE DATA FIELDS (cont'd)

Variable Name	Format	Limits
Thermal Power	9.9E+99	Enter in scientific notation the measured or calculated thermal power (in watts) for all RH TRU and for CH TRU if the thermal power density is greater than 0.1 W/cu ft; otherwise, leave the field blank for CH TRU.
Content Code	999	Enter WIPP-approved numeric content code.
Pu-239 Fissile Gram Equivalent	9.999E+99	Enter in scientific notation the Pu-239 fissile gram equivalent.
Total Alpha Activity	9.9E+99	Enter in scientific notation the total curies of alpha activity for CH TRU; enter 0.0E+00 for RH TRU.
PE-Ci	9.9E+99	Enter in scientific notation the PE-Ci of activity.
Hazardous Material Data (occurs 0 to 14 times)		
Hazardous Material ID Code	(4X)	Enter code found in 40 CFR 261, Subparts C and D. Leave field blank if none.

TABLE 3. WASTE PACKAGE DATA FIELDS (cont'd)

Variable Name	Format	Limits
Hazardous Material Quantity	9.9E+99	Enter in scientific notation the quantity of hazardous material present in the waste. Leave field blank if none.
Hazardous Material Quantity Units	A	Enter L for liters, G for grams, or blank if none.
Waste Package Certification Date	YYMMDD	Enter last 2 digits of the year, 2-digit month, and 2-digit day of the month.
Additional Data	(35X)	Enter in this free field additional data considered significant by the shipper.
Certifying Site	(2A)	Enter 2-letter site ID code.
Certifying Official's Name	(25A)	Enter last name and first and (if available) middle initials of official who certified the waste package.
Radionuclide Data (occurs 1 to 25 times)		
Radionuclide Symbol	(7X)	Enter radionuclide symbol.
Radionuclide Quantity	9.999E+99	Enter quantity of radionuclide.
Radionuclide Units	A	Enter G for grams or C for curies.

TABLE 4. APPROVED TRU WASTE CONTAINERS AND CODES

Code	Container Description
001	Standard 55-gal. (208-L) metal drum (DOT Spec. 17C and 17H)
002	Rectangular metal box (74.4 X 50.5 X 38.5 in. LWH)
003	Rectangular metal box (68 X 54 X 38.5 in. LWH)
004	Rectangular metal box (88 X 54 X 54 in. LWH)
005	Rectangular metal box (71 X 57 X 52.5 in. LWH)
006	Standard 55-gal. (208-L) metal drum (DOT Spec. 6M)
007	Rectangular metal box (50.4 X 58.4 X 72.4 in. LWH)
008	Rectangular metal box (4 X 4 X 7 ft LWH)
009	Standard Waste Box (37 in. high X 71 in. long OD/54.25 in. short OD X 45.06 in. side)
101	H-2-91273-1 RH canister, 121-in. long X 26-in. OD
102	H-2-91284-1 RH canister, 121-in. long X 26-in. OD

Notes:
1. The generator or shipper shall request a container code from the WWIS Data Administrator (505-885-8883) at WIPP prior to shipping to WIPP any Type A packaging not listed above.
2. See Reference 2 for data on RH canisters.

TABLE 5. THERMAL POWER OF SELECTED TRU RADIONUCLIDES AND MIXTURES

Source	Watts/Gram
Pu-238	0.56
Pu-239	0.002
Am-241	0.11
Cm-244	2.84
Weapons-grade Pu (94% Pu-239, 6% Pu-240)	0.002
Heat-source Pu (80% Pu-238, 16% Pu-239)	0.5
High-burnup Pu (60% Pu-239, 24% Pu-240)	0.01
Hanford fuels-grade Pu (88% Pu-239, 12% Pu-240)	0.003

TABLE 6. RECORD AND FILE LAYOUT

Record	Begins in Column	Field	Field Format
1	1	Record Type	S
	2	Shipment Number	A8
	9	Shipment Date	A6 'YYMMDD'
	15	Vehicle Type	A1
	16	Waste Type	A2
	18	Shipment Certification Date	A6 'YYMMDD'
	24	TRUPACT/Cask Number	A3
	27	TRUPACT/Cask Number	A3
	30	TRUPACT/Cask Number	A3
	33	Package Assembly Number	A8
	41	Package Assembly Number	A8
	49	Package Assembly Number	A8
	57	Package Assembly Number	A8
	65	Package Assembly Number	A8
	73	Package Assembly Number	A8
	81	TRUPACT APC Certifier	A25
2	1	Record Type	P
	2	Package ID Number	A13
	15	Container Code	A3
	18	Shipment Number	A8
	26	Closure Date	A6 'YYMMDD'
	32	TRUPACT/Cask Number	A3
	35	Waste Type	A2
	37	Package Assembly Number	A8
	45	Package Certification Date	A6 'YYMMDD'
	51	Internal RH TRU Container	9
	60	Weight	A7 (9.9E+99)
	67	Organic Materials Weight	A7 (9.9E+99)
	74	Organic Materials Volume %	999
	77	Surface Dose Rate	A7 (9.9E+99)
	84	Neutron Contribution	A7 (9.9E+99)
	91	Thermal Power	A7 (9.9E+99)
	98	Pu-239 Fissile Gram Equivalent	A9 (9.999E+99)
	107	Gas Generation	A7 (9.9E+99)
	114	Total Alpha Activity	A7 (9.9E+99)
	121	Content Code	A3
	124	Certifying Site	A2
	126	PE-Ci	A7 (9.9E+99)
	133	Misc.	A35
	168	WAC Exception Number	A7
	175	Certifying Official's Name	A25

TABLE 6. RECORD AND FILE LAYOUT

Record	Begins in Column	Field	Field Format
3	1	Record Type	R [11 per record (25 total)]
	2	Radionuclide Symbol	A7
	9	Radionuclide Quantity	A9 (9.999E+99)
	18	Radionuclide Units	A1
4	1	Record Type	H [14 per record (14 total)]
	2	Hazardous ID Code	A4
	6	Hazardous Material Quantity	A9 (9.999E+99)
	15	Hazardous Material Qty. Units	A1