

CH2M HILL Hanford Group, Inc.
NON-RADIOACTIVE HAZARDOUS
MATERIALS/HAZARDOUS WASTE
SHIPMENTS

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1.0 PURPOSE

The U.S. Department of Transportation (DOT) regulates the interstate and certain intrastate transportation of hazardous materials and hazardous waste under the Hazardous Materials Transportation Act (HMTA) as implemented in 49 CFR, Parts 100-199. Washington is an agreement state and requires full compliance with DOT for intrastate transportation in the Washington Administrative Code (WAC) 446-50-080(1). The regulations address all modes of transportation (air, rail, highway, waterway, and pipeline) and establish requirements for shipping papers, proper containers, marking and labeling of containers, placarding of vehicles, and incident reporting. These regulations apply to any material that may pose undue hazard in transportation including all hazardous materials and hazardous wastes including regulated samples sent for testing as defined in the 49 CFR and 40 CFR.

In the State of Washington, the Department of Ecology (Ecology) regulates hazardous wastes through WAC 173-303 (Dangerous Waste Regulations) through authority granted by the U.S. Environmental Protection Agency (EPA). Ecology further classifies hazardous wastes into dangerous waste (DW) and extremely hazardous waste (EHW) and defines conditions for their evaluation, handling, control, and disposal. Project Hanford Procedures for Environmental Compliance and the Hanford Site Waste Acceptance Criteria give additional information on hazardous wastes. The packaging, shipping, and handling of either hazardous materials or hazardous wastes in Washington State is regulated, as applicable, by the DOT, EPA, or Ecology, whichever is the most stringent.

1.1 Offsite Hazardous Materials/Hazardous Waste Shipments

For hazardous materials/hazardous waste (HM/HW) shipments departing from the Hanford site, Waste Management Services ~~completes~~ **completes** the ~~final~~ **final** Hazardous Material Shipment Record (HMSR) or Uniform Hazardous Waste Manifest (UHW). The ~~generator of the~~ **generator of the** record is responsible for supplying complete and accurate information on ~~hazardous material~~ **hazardous material**. All offsite shipments must be in full compliance with federal, state, and site requirements including emergency response information, which includes a 24-hour phone number on the shipping paper. Waste Management Services ~~inspects all containers for proper labeling and marking prior to the~~ **inspects all containers for proper labeling and marking prior to the** scheduled offsite shipment. ~~Offsite shipments of hazardous waste are currently inspected and shipped by Fluor Hanford Generator and Waste Acceptance Services.~~ **Offsite shipments of hazardous waste are currently inspected and shipped by Fluor Hanford Generator and Waste Acceptance Services.**

- Deleted:** Technical
- Deleted:** Inc. - Northwest Operations reviews and approves
- Deleted:** from the shipper and completes the final shipping papers or bills of lading for transportation offsite
- Deleted:** shipper
- Deleted:** the HMSR or UHW. The shipper must be trained and knowledgeable with 49 CFR, Parts 171-179 and 40 CFR and WAC for waste shipments
- Deleted:** Technical
- Deleted:** Inc. - Northwest Operations

1.2 Onsite Hazardous Material/Hazardous Waste Shipments

For onsite shipments of HM/HW, the same general procedures apply. The HMSR filled out by the shipper generally serves as the only documentation to accompany the shipment onsite. Onsite shipments of Hazardous Waste no longer require the use of the UHWM per revision of the site Environmental Compliance Program. Hanford Site and facilities S/RIDs and DOE 460.1A with DOE-RL guidance requires that all onsite shipments of HM/HW comply with the DOT regulations, or at least be conducted with an equivalent degree of safety, or defensible safety basis as provided by the DOE RL-2001-36 Hanford sitewide Transportation Safety Document (TSD). Waste shipments are also still subject to the transportation requirements as addressed in the RCRA permit under Section II.Q and those found in RPP-MP-609.

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2.0 REQUIREMENTS

2.1 Procedure for Making Nonradioactive Hazardous Material/Hazardous Waste Shipments
(5.6.a.1, 5.6.a.2, 5.6.a.3, 5.6.a.4, 5.6.a.5, 5.6.a.6, 5.6.a.7, 5.6.a.8, 5.6.a.9)

This section describes in general terms the actions required to prepare (nonradioactive) hazardous material/waste for transport.

1. Define the material to be shipped by chemical, technical, or generic name. Determine or define hazardous properties. Determine quantity of material to be shipped (by weight, volume, or otherwise, as appropriate). (5.7.a.1)
2. If material to be shipped is currently packaged, determine if packaging is in good condition and meets DOT regulations.
3. If material is a waste, determine if it is a dangerous waste in accordance with WAC 173-303. Waste Management Services will provide assistance in this area.
4. Consult the Hazardous Materials Table (HMT) in 49 CFR 172.101 and its appendix and Figure 1 for the HMT format.
 - a. Determine if material is a reportable quantity of a hazardous substance (49 CFR 172.101, Appendix).
 - b. Determine if material is a Poison Inhalation Hazard (49 CFR 173.3a).
 - c. Establish proper shipping name (Column 2 of HMT).
 - d. Determine hazard class and/or division (Column 3 of HMT).
 - e. Determine identification number (Column 4 of HMT).
 - f. Determine Packing Group (Column 5 of HMT).
 - g. Determine labeling requirements that apply to the shipment (Column 6 of HMT).

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- h. Determine special provisions applicable to the shipment (Column 7 of HMT).
- i. See quantity and storage restrictions found in Columns 8a, 8b, 8c, and 9 of HMT if shipment is by aircraft, railcar, or vessel. (When packaging requirements are specified, they are in addition to the standard requirements for all packagings prescribed in 49 CFR 173.24)
5. If material is a hazardous waste, contact Waste Management Services for waste designation.
6. United States Code of Federal Regulations, Title 49 (49 CFR), Part 173, contains specific requirements for packaging hazardous materials or wastes identified in the HMT. Examine these requirements closely since they specify specific types of packaging, loading requirements and restrictions, internal packaging, and markings specific to the commodity being shipped. (5.7.a.2, 5.7.a.3, 5.7.b.1, 5.7.b.2, 5.7.c.1, 5.7.c.2, 5.7.c.3, 5.7.c.4, 5.7.c.5, 5.7.c.6, 5.7.c.7, 5.10.g.)
7. Select a container based on the following considerations:
- a. The applicable determinations of items 1 through 6 above
- b. Size, shape, weight, and volume of material to be shipped
- c. Destination, mode of transport, and consignee's ability to handle receipt of the shipment. (Air Carriers may have different requirements for size and weight limits for sample shipments.)
- d. Availability of shipping containers.
8. If material is still in the original packaging or the waste was previously packaged, verify regulatory compliance to current regulations through inspection of the EPA and DOT markings and labeling on the container for both hazardous material and waste and review of the documentation describing the packaging of the waste. If the packaged material is not in compliance, it will have to be repackaged or overpacked.
9. If material is unpackaged or requires repackaging, obtain an acceptable container and inspect it. A quality assurance/quality control inspection may be required.
10. Load the container with authorized contents only. Assemble and seal the package in accordance with appropriate procedures. Packages must be marked and labeled in accordance with the regulations found in 49 CFR 172, Subparts D and E, respectively. (5.4.a, 5.5.a, 5.5.b, 5.6.b.1, 5.6.b.2, 5.6.b.3, 5.6.b.4, 5.6.b.5, 5.6.b.6, 5.6.b.7, 5.6.b.8, 5.6.b.9, 5.6.b.10, 5.6.b.11, 5.6.c.1, 5.6.c.2, 5.6.c.3, 5.6.c.4, 5.6.c.5, 5.6.c.6, 5.6.c.7, 5.6.c.8)
11. For offsite shipments **of hazardous waste, contact Fluor Hanford Generator and Waste Acceptance Services**.

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12. A hazardous material shipment needs a completed HMSR form in accordance with instructions, found in Section 3.0 that follows. The shipper retains the **original** copy and sends the completed HMSR together with other pertinent papers or instructions with the shipment.

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13. If the material is a hazardous waste, complete a UHWM in accordance with instructions found in Section 3.0. Send completed manifest together with other pertinent papers or instructions with the shipment. Also refer to **RPP-MP-609**.

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14. Furnish appropriate placards (see 49 CFR 172, Subpart F) to the carrier or, if vehicle is equipped with permanent placards, ensure that placards are turned to the proper hazards. (5.6.d.1, 5.6.d.2, 5.6.d.3, 5.6.d.4, 5.6.d.5, 5.6.d.6)

15. Ensure that riggers or truck drivers are aware of any tie-down requirements to secure the load. It is the packager/shipper's responsibility to inspect and approve segregation and securing of all loads to ensure tie-down requirements are met. Guidelines for tie-downs are found in 49 CFR 177.834(a). Drivers are also responsible for emergency response information requirements, including checking the shipping papers for attached **emergency response guides (ERGs)**, or a copy of the ERG is in the cab, and a 24 hour emergency contact number.

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16. Prior to loading, ensure the transporting vehicle has no obvious defects and that its Class A, B, or equivalent preventive maintenance inspections are current. (GSA inspects more frequently than just an annual inspection. They will normally install a "B" sticker indicating date and mileage for next inspection.) (5.6.c.1, 5.6.c.2, 5.6.c.3, 5.8.a.1)

3.0 PREPARING A HAZARDOUS MATERIAL SHIPMENT RECORD

The following instructions are keyed to numbered blocks on the Hazardous Material Shipment Record (HMSR), form BC-6002-652 (shown in Figure 2).

3.1 Shipment Description Section Completed by Originator

1. Provide the complete address of the consignee and designate an individual to whom the shipment is being sent.

2. Identify originating facility. Originator signs, dates form, and indicates originating contractor.

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3. Check appropriate boxes to indicate method of payment for shipment. Provide complete cost code.

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4. Describe material to be shipped and its packaging as required by column headings. It is essential that all data be provided for each hazardous material being shipped.

5. Indicate total number of shipping units and gross weight of shipment. Also, identify placards required on the vehicle. See 49 CFR 172, Subpart F.

- 6. Identify property control, release to ship, or return order numbers, as applicable.
- 7. Answer questions **regarding outer package conditions**. Describe internal packaging, if any; include type and size of inner containers and quantity of material contained in each.
- 8. Have the radiation control technician (**RCT**) complete the radiation release. Space is available for the survey number, date, and signature of the RCT who is responsible for the survey. **This section can be completed by the shipper if a radiological release certification form has been completed.**
- 9. Have the driver complete the transporter section. Space is available for the vehicle number and driver signature.

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3.2 Certification Section Completed by Certifier

- 1. The authorizing signature on the HMSR shall be that of a delegated employee (on Authorized Shippers list) who has successfully completed the DOT modules and either the "Advanced Hazardous Materials Training" (020067), Advanced Waste Training (020159), or Advanced Radioactive Materials Training (020069). Retraining is required every **three** years.
- 2. For offsite shipments made via aircraft, the appropriate boxes must be checked to indicate prescribed limitations are met.

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3.3 Offsite Shipment Approval Section Completed by Traffic Management

Waste Management Services assigns a bill of lading number, identifies the date shipped and routing, and approves release of shipment to the carrier. Retain a copy of the HMSR as required in **HNF-IP-0842, Volume 13, Section 1.2**.

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Deleted: Part VII, Table VII-1

4.0 PREPARING A UNIFORM HAZARDOUS WASTE MANIFEST

(5.10.b, 5.10.c, 5.10.d, 5.10.e, 5.10.f)

The following instructions are keyed to numbered blocks on a specimen copy of the UHWM form used (Figure 3). Be sure to check that the authorized date in upper right hand corner is current. If outdated, EPA **has authorized** the continued use of the forms. The Federal register will publish this authorization, allowing preparers of the UHWM to line-out void expiration dates and write in the new extension date along with the preparer's initials in the upper right-hand corner. For additional guidance in preparing this form, contact **Waste Management Services**.

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Approved continuation sheets are available from **Waste Management Services**, if necessary.

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Retain a copy of the UHWM as required in **HNF-IP-0842, Volume 13, Section 1.2**.

Deleted: Part VII, Table VII-1

Items A through K on the form are not required by federal regulations; however, states may require generators to complete some or all of the items as part of the state manifest reporting requirements. Fluor Hanford Generator and Waste Acceptance **Waste Management Services** will notify the generator on a case-by-case basis if any of this data is required. For example, Box I requires WDOE Waste Codes (e.g., DOO1, WPO1).

4.1 Generator Section Completed by Originator

1. Enter the generator's EPA identification number. At the Hanford site, the identification number is WA 789 000 8967. (5.10.a) Also enter a manifest document number assigned by **Waste Management Services**.
2. Enter total number of pages used to complete the manifest (main page plus each approved continuation sheet).
3. Enter the name and address of the generator.
4. Enter the phone number of the generator.
5. Identify the first transporter company by name.
6. Enter transporter EPA identification number, WA 789 000 8967 if a Dyncorp driver and truck is used.
7. Enter second transporter company name, if applicable.
8. Enter second transporter EPA identification number, if applicable.
9. Identify the company and site address of the facility designated to receive the waste. The address must be the site delivery location, not the company mailing address.
10. Enter the EPA number for the designated receiving facility.
11. Enter the DOT description, which includes the proper shipping name, hazard class and/or division, identification number (United Nations (UN) or North American (NA) as applicable) and packing group (in this order) for each waste as identified in 49 CFR 172. If a hazardous substance, place a reportable quantity (RQ) in the HM box and also identify the constituents making the material a hazardous substance. **If not, place an "X" in the HM column.** Any not-otherwise-specified (N.O.S.) entry must identify the constituent that makes it hazardous. If dangerous when wet, place words "Dangerous When Wet" in box in association with proper shipping name. If toxic by inhalation place words "Poison-Inhalation Hazard" in box in association with the basic description.

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12. Enter the number and type of containers for each waste using appropriate abbreviations from the listing below.

TYPE OF CONTAINERS

DM = Metal drums, barrels, kegs
DW = Wooden drums, barrels, kegs
DF = Fiberboard or plastic drums, barrels, kegs
TP = Tanks, portable
TT = Cargo tanks (tank trucks)
TC = Tank cars
DT = Dump trucks
CY = Cylinders
CM = Metal boxes, cartons, cases
CF = Fiber or plastic boxes, cartons, cases
CW = Wooden boxes, cartons, cases
BA = Burlap, cloth, paper or plastic bags

13. Enter the total quantity of waste described on each line.
14. Enter the appropriate abbreviation from the listing below to indicate the unit of measure. The preferred unit of measure is K for kilograms. Washington State requires net weight to be entered.

UNIT OF MEASURE

G = Gallons (liquid only)
L = Liters (liquids only)
P = Pounds
K = Kilograms
T = Tons (2,000 lb)
M = Metric tons (1,000 kg)
Y = Cubic yard
N = Cubic meters

NOTE: Item I – The dangerous waste number must be provided in this space. The waste code does not have to be entered in this block if it already appears in the corresponding U.S. DOT description block.

15. Generators may use this space to indicate special transportation, treatment, storage, or disposal information, etc. Emergency Response Information, such as ERG or MSDS, is required including a 24-hour phone number (509) 373-3800.
16. The generator must read, sign (by hand), and date the certification statement. The authorizing signature shall be that of a delegated individual who is on the authorized shippers list and who has successfully completed the “Basic DOT Hazardous Materials Regulations Course along with DOT Hazardous Waste Certification” course (see

Section VIII). The words “on behalf of DOE-RL” should immediately follow the authorizing signature. This is a result of RL delegating authority to PHMC contractors to sign the generators certification statement on the manifest.

4.2 Transporters Section Completed by Transporter

- 1. Enter (print or type) the name of the person accepting the waste described on the manifest by signing and entering date of receipt.
2. Same as item 1 but for the second transporter, if applicable.

4.3 Facility Section Completed by Treatment, Storage, Disposal Facility (5.10.h, 5.10.i, 5.10.j)

- 1. Receiving facility must note any significant discrepancies between the wastes described on the manifest and the waste actually received at the facility.
2. The name of the person accepting the waste on behalf of the receiving facility must be entered (printed or typed). The person must acknowledge acceptance of waste described on the manifest by signing and entering the date of receipt.

5.0 SOURCES

- 1.
2. DOE 460.1A, “Transportation and Packaging Safety.”
3. DOE 460.2A, “Departmental Materials Transportation and Packaging Management.”
4. 40 CFR, “Protection of Environment,” Part 262, “Standards Applicable to Generators of Hazardous Waste,” Subpart C, “Pre-Transport Requirements.” (S/RID)
5. 40 CFR, “Protection of Environment,” Part 761, “Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution on Commerce, and Use Prohibitions,” Subpart C, “Marking of PCBs and PCB Items.” (S/RID)
9. 49 CFR, Code of Federal Regulations, “Transportation,” Parts 100-199, 300-400.
10. WAC 173-303, “Dangerous Waste Regulations.” (S/RID)
11. Hanford Facility RCRA Permit.
12.
13. Hanford Site Solid Waste Acceptance Criteria.
14. RPP-MP-003, “Integrated Environment, Safety and Health Management System Description for the Tank Farm Contractor.”

Deleted: DOE-RL Guidance Letter 95-SWT-186, “Cancellation of RLID 5480.3, and RL 5480.1, ¶ Change 1, Chapter III”, dated 3-29-95.

Deleted: a. Section 32, “Marking.” ¶

Deleted: a. Section 40 (b), “Marking Requirements.” ¶

b. Section 40 (e), “Marking Requirements.” ¶

6. 49 CFR, “Transportation”, Part 172, “Hazardous Materials Table, Special Provisions, ¶ Hazardous Materials Communications, Emergency Response Information, and Training” ¶ Requirements”. (S/RID) ¶

a. Subpart C, “Shipping Papers.” ¶

1. Section 200, “Applicability.” ¶

2. Section 201, “General entries.” ¶

3. Section 202, “Description of hazardous material on shipping papers.” ¶

4. Section 203(b), “Limited quantities.” ¶

5. Section 203(c), “Hazardous substances.” ¶

6. Section 203(e), “Empty packagings.” ¶

7. Section 203(k), “Technical names for “n.o.s.” and other generic descriptions.” ¶

8. Section 204, “Shipper’s certification.” ¶

9. Section 205, “Hazardous waste manifest.” ¶

b. Subpart D, “Marking.” ¶

1. Section 300, “Applicability.” ¶ [1]

Deleted: a. Section 170(2), “Requirements for generators of dangerous waste.” ¶

b. Section 180, Introduction and (1), “Manifest.” ¶

c. Section 180(2), “Manifest.” ¶

d. Section 180(3), “Manifest.” ¶

e. Section 180(4), “Manifest.” ¶

f. Section 180(5), “Manifest.” ¶

g. Section 190, “Preparing dangerous waste for transport.” ¶

h. Section 370(2), “Manifest syst... [2]

Deleted: HNF-IP-0842, RPP Administration, Volume XVIII, “Solid Waste Management.”

15. RPP-MP-609, "Waste Generating Plan."
16. DOE/RL-2001-36, Hanford Sitewide Transportation Safety Document.

Figure 1. Hazardous Material Table Format.

§172.101 HAZARDOUS MATERIALS TABLE.

Symbols (1)	Hazardous materials descriptions and proper shipping names (2)	Hazard class or Division (3)	Identifi-cation Numbers (4)	Pack-ing group (5)	Label(s) required (if not excepted) (6)	Special provisions (7)	(8) Packaging authorization (§173.000)			(9) Quality Limitations		(10) Vessel Storage Requirements	
							Exceptions (8A)	Nonbulk packaging (8B)	Bulk packaging (8C)	Passenger aircraft or railcar (9A)	Cargo aircraft only (9B)	Vessel storage (10A)	Other storage provisions (10B)
	Phosphorus oxybromide, molten	8	UN2578	II	Corrosive	B2, B8, N41, N43, T8, T27	None	202	242	Forbidden	Forbidden	C	40
	Phosphorus oxychloride	8	UN1810	II	Corrosive, Poison	2, A7, B9, B14, B32, B74, B77, N34, T38, T43, T45	None	227	244	Forbidden	30 L	C	8, 40
	Phosphorus pentabromide	8	UN2691	II	Corrosive	A7, N34	154	202	240	Forbidden	50 kg	B	12, 40, 48
	Phosphorus pentachloride	8	UN1806	II	Corrosive	N7, N34	None	202	240	Forbidden	50 kg	C	40
	Phosphorus pentafluoride	8	UN2196		Poison gas	1	None	302	None	Forbidden	Forbidden	D	40
	Phosphorus pentasulfide, free from yellow or white phosphorus	4.3	UN1340	II	Dangerous when wet	A20, B59	None	212	242	15 kg	50 kg	B	74
	Phosphorus pentoxide	8	UN1806	II	Corrosive	A7, N34	154	212	240	15 kg	50 kg	A	10
	Phosphorus sesquisulfide, free from yellow or white phosphorus	4.1	UN1341	II	Flammable solid	A20, N34	None	212	240	15 kg	50 kg	B	74
	Phosphorus tribromide	8	UN1808	II	Corrosive	A3, A6, A7, B2, B25, N34, N43, T8	None	202	242	Forbidden	30 L	C	8, 40
	Phosphorus trichloride	8	UN1809	II	Corrosive, poison	2, A3, A7, B9, B14, B15, B32, B74, B77, N34, T38, T43, T45	None	227	244	Forbidden	30 L	C	8, 40
	Phosphorus trioxide	8	UN2578	III	Corrosive		154	213	241	25 kg	100 kg	A	12, 48
	Phosphorus trisulfide, free from yellow or white phosphorus	4.1	UN1343	II	Corrosive flammable solid	A20, N34	None	212	240	15 kg	50 kg	B	74

Figure 2. Hazardous Material Shipment Record (HMSR).
(form BC-6002-652)

SHIP TO:		HAZARDOUS MATERIAL SHIPMENT RECORD (HMSR)				Shipment Number 000057
Company _____		Originating Facility		Originator Signature		Date
Address _____		Building _____		From _____		
City, State, Zip _____		Area _____		From _____		
Attention _____		OFFSITE ONLY:		SHIP: PREPAID <input type="checkbox"/> COLLECT <input type="checkbox"/>		
VIA _____				Cost Code _____		
CONTAINERS/PACKAGING				CONTENT/DESCRIPTION		
Number of Containers	Type Container	Package Spec.	Package Dimension	Quantity Pkg (Net)	Gross Wt Each Pkg	See 49 CFR 172.101(c) Hazardous Material Table
						Proper Shipping Name: Hazard Class UN/NA No.: PG List Secondary Hazards: List Labels Req'd Applied:
						Proper Shipping Name: Hazard Class UN/NA No.: PG List Secondary Hazards: List Labels Req'd Applied:
						Proper Shipping Name: Hazard Class UN/NA No.: PG List Secondary Hazards: List Labels Req'd Applied:
Total No. Containers		Gross Wt of Shipment		Identify Placards Required		Identify Property Control or Return Order No. (if applicable)
				1 3		
				2 4		
(Circle One)				Describe Internal Packaging		
Material in manufacturers original container				Yes No		
Container free of deterioration or damage				Yes		
Container acceptability documented				Yes		
Material is packaged, sealed, marked and labelled to meet DOT requirements				Yes		
Radiation Release	Survey No.	Date	RM Signature	Print Name		
Transporter				Receiver		
Vehicle Number		Driver Signature		Receiver Signature		Date
CERTIFICATION						
CONTRACTORS CERTIFICATION	This is to certify that the above named materials are properly classified, described, packaged, marked and labelled and are in proper condition for transport according to the applicable regulations of the Department of Transportation.				This shipment is within the limitations prescribed for	
	Authorizing Signature: _____				Print Name: _____	
FOR OFFSITE SHIPMENTS - ADDITIONAL APPROVAL REQUIRED						
WMFS	B.L. No.	Date Shipped	ETA	Routing	Special Considerations	
	WMFS Traffic: _____			WMFS Shipping: _____		

- a. Section 40 (b), "Marking Requirements".
 - b. Section 40 (e), "Marking Requirements".
6. 49 CFR, "Transportation", Part 172, "Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements". (S/RID)
- a. Subpart C, "Shipping Papers."
 - 1. Section 200, "Applicability."
 - 2. Section 201, "General entries."
 - 3. Section 202, "Description of hazardous material on shipping papers."
 - 4. Section 203(b), "Limited quantities."
 - 5. Section 203(c), "Hazardous substances."
 - 6. Section 203(e), "Empty packagings."
 - 7. Section 203(k), "Technical names for "n.o.s." and other generic descriptions."
 - 8. Section 204, "Shipper's certification."
 - 9. Section 205, "Hazardous waste manifest."
 - b. Subpart D, "Marking."
 - 1. Section 300, "Applicability."
 - 2. Section 301, "General marking requirements for non-bulk packagings."
 - 3. Section 302, "General marking requirements for bulk packagings."
 - 4. Section 303, "Prohibited marking."
 - 5. Section 304, "Marking requirements."
 - 6. Section 312, "Liquid hazardous materials in non-bulk packagings."
 - 7. Section 316, "Packagings containing materials classed as ORM-D."
 - 8. Section 324, "Hazardous substances in non-bulk packagings."
 - 9. Section 332, "Identification number markings."
 - 10. Section 334, "Identification numbers; prohibited display."
 - 11. Section 336, "Identification numbers; special provisions."

- c. Subpart E, "Labeling."
 - 1. Section 400, "General labeling requirements."
 - 2. Section 400 (a), "Exceptions from labeling."
 - 3. Section 401, "Prohibited labeling."
 - 4. Section 402, "Additional labeling requirements."
 - 5. Section 404, "Labels for mixed and consolidated packaging."
 - 6. Section 405, "Authorized label modifications."
 - 7. Section 406, "Placement of labels."
 - 8. Section 407, "Label specifications."

- d. Subpart F, "Placarding."
 - 1. Section 500, "Applicability of placarding requirements."
 - 2. Section 502, "Prohibited and permissive placarding."
 - 3. Section 504, "General placarding requirements."
 - 4. Section 505, "Placarding for subsidiary hazards."
 - 5. Section 506, "Providing and affixing placards: Highway."
 - 6. Section 516, "Visibility and display of placards."

- e. Subpart G, "Emergency Response Information."
 - 1. Section 600, "Applicability and general requirements."
 - 2. Section 602, "Emergency response information."
 - 3. Section 604, "Emergency response telephone number."

- 7. 49 CFR, "Transportation, Part 173, "Shippers - General Requirements for Shipments and Packagings," (S/RID)
 - a. Subpart A, "General."
 - 1. Section 2a, "Classification of a material having more than one hazard."
 - 2. Section 3, "Packaging and exceptions."
 - 3. Section 12, "Exceptions for shipment of waste materials."

 - b. Subpart B, "Preparation of Hazardous Materials for Transportation."
 - 1. Section 22, "Shipper's responsibility."
 - 2. Section 29, "Empty packagings."

 - c. Subpart E, "Non-bulk Packaging for Hazardous Materials Other Than Class 1 and Class 7."
 - 1. Section 173, "Paint, paint-related material, adhesives and ink and resins."

- materials in 2. Section 201(a), "Non-bulk packagings for liquid hazardous Packing Group I."
- materials in 3. Section 202(a), "Non-bulk packagings for liquid hazardous Packing Group II."
- materials in 4. Section 203(a), "Non-bulk packagings for liquid hazardous Packing Group III."
- materials in 5. Section 211(a), "Non-bulk packagings for solid hazardous Packing Group I."
- materials in 6. Section 212(a), "Non-bulk packagings for solid hazardous Packing Group II."

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- materials in 7. Section 213(a), "Non-bulk packagings for solid hazardous Packing Group III."

- 8. 49 CFR, "Transportation", Part 177, "Carriage By Public Highway." (S/RID)
 - a. Subpart C, "Segregation and Separation Chart of Hazardous Materials."
 - 1. Section 848, "Segregation of hazardous materials."

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- a. Section 170(2), "Requirements for generators of dangerous waste."
- b. Section 180, Introduction and (1), "Manifest."
- c. Section 180(2), "Manifest."
- d. Section 180(3), "Manifest."
- e. Section 180(4), "Manifest."
- f. Section 180(5), "Manifest."
- g. Section 190, "Preparing dangerous waste for transport."
- h. Section 370(2), "Manifest system."
- i. Section 370(3), "Manifest system."
- j. Section 370(4), "Manifest system."