

# Chapter Nine

## FIFRA PESTICIDE PRODUCT SAMPLING

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# FIFRA PESTICIDE PRODUCT SAMPLING

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## AUTHORITY

Section 9(a) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, authorizes any officer or employee duly designated by the Administrator to enter, at reasonable time, any establishment or other place where pesticides or devices are held for distribution or sale for the purpose of inspecting and obtaining samples of any pesticides or devices packaged, labeled, and released for shipment, and samples of any containers or labeling for such pesticides or devices.

Section 12(a)(2)(B) of the Act makes it unlawful for any person to refuse to allow a “duly designated agent of the EPA Administrator” to take a sample of any pesticide pursuant to section 9 or to inspect records to be retained pursuant to section 8. If consent is not obtained to enter the establishment, see Chapter 15 for obtaining a warrant.

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## OBJECTIVES

An official sample of a pesticide formulation or device is necessary for use as evidence in most of the enforcement actions taken as a result of a producer, marketplace, or dealer inspection. A sample must be suitable to support the government’s charge that a violation has occurred. The sample must conform to the rules regarding admissibility of evidence. A properly collected, prepared, and documented sample includes the following:

- < Sufficient portion of a batch of a pesticide for laboratory analysis (as stated in other chapters of this manual, please consult the lab that analyzes your samples and make sure you are shipping enough quantity of sample, and that they

can analyze for that chemical or active ingredient, which will be shipped to that location).

- < This may include photographs and or copies of records, data, or correspondence.
- < Labeling and/or literature, or copies of these items, that pertain to this product and/or batch, with signatures or initials of the person who authorized the sampling.
- < Signed statements from persons who may potentially serve as witnesses.

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## POLICY

Samples shall be collected and prepared in accordance with the procedures outlined in this manual. The inspector shall fully document any deviations from these procedures in his or her field notebook. These discrepancies may be very important to the laboratory analyzing the samples.

It is the Agency's policy to reduce to a minimum the amount of time between the date of sample collection and the date that any appropriate enforcement action is taken. The inspector plays an important role in minimizing this interval by promptly delivering or forwarding samples and records to the laboratory. Pesticide formulation samples should not be held for more than five working days from the time of collection to the time of shipment to the laboratory.

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## SAMPLE COLLECTION

### Sources of Pesticide Samples

There are three main potential sources of pesticide product samples, 1) pesticide producing and device producing establishments (discussed in Chapter 7), 2) Marketplace (discussed in Chapter 7), and 3) Use/Misuse (discussed in Chapter 12). Producer Establishment lists may be obtained from your EPA Regional Office. An inspector may also be called on to sample devices at a producer establishment. Further, Device Producing Establishments should be inspected and labels of devices reviewed for compliance with the statute, regulations, and polices.

Samples of unregistered pesticides, investigational samples, or those pesticides that are not available for sampling at the producer level may be sampled at a marketplace. This can include wholesale and retail establishments, farm dealerships, seed, feed, and fertilizer outlets, many home improvement stores, etc.

## Marketplace Inspections

### Potential Inspection Sites\*

- < Animal health and veterinarian suppliers
- < Hardware stores
- < Barber and beauty supply dealers
- < Dairy equipment and supply dealers
- < Feed, seed, and fertilizer dealers
- < Janitorial supply dealers
- < Pest control operators
- < Wholesale and retail grocers
- < Chemical suppliers
- < Medical and dental suppliers
- < Hotel and restaurant suppliers
- < Paint dealers, and boat supply dealers/boatyards
- < Pest control operators
- < Pool, spa, and waterbed dealers
- < Lawn and garden supply dealers
- < Retail outlets (e.g., Wal-mart, K-mart, etc.)

\*Not an inclusive list.

### Entry

Present credentials and issue a Notice of Inspection to the most responsible person present at the time of the inspection. If a violation is suspected or if the inspection is not routine, the reason for inspection and the suspected violation must be noted in writing on the Notice of Inspection.

### Persons Interviewed

- < Name, address, and telephone number of facility.
- < Name, title, telephone number of person(s) interviewed.

### Description of Activity

Brief description of facility or individual activities, i.e. janitorial supply dealer, pest control company, wholesale grocer, etc.

### Label/Labeling Review

A thorough label review of pesticides being offered for sale or distribution should be conducted to verify compliance with the registration requirements and to identify instances of suspected misbranding. Also document collateral labeling and literature such as shelf liners, advertising material, flyers, etc.

Note: Antimicrobials, treated articles, pet products, swimming pool and pond products, paints, etc. are excellent products for review in addition to typical farm, home, and garden pesticides.

### **Pesticide Product Review**

- < Note any products requiring child resistant packaging
- < Note any canceled/suspended pesticides
- < Observe products for leaking containers
- < Note security/safety of restricted use pesticides in storage

### **Shipping Records**

Suspected violations should be documented by collecting shipping records to document the suspected violative product's movement in the channels of trade. Recognizing that shipping records are sometimes difficult to obtain in the marketplace, make every effort to document at least five separate shipments/sales or collect records documenting five separate days of shipments or sales, whichever reveals the greater number. Inspectors are encouraged to obtain computer-generated records. If records are unavailable, document this fact in a statement or affidavit signed by the agent-in-charge with an explanation of where the records are and how they can be obtained.

### **Sampling**

- < Collect physical or documentary sample(s) of any/all products suspected to be in violation
- < Issue a Receipt for Samples

### **Narrative**

Write a complete narrative of the inspection, in accordance with establishment procedures.

## **Types of Samples**

Official samples of pesticide products or devices are those that, if potentially violative or otherwise problematic, serve as a basis for legal or regulatory action. In general, an official sample is categorized in one of five ways: physical, induced, documentary, import, or use dilution.

- < Physical samples are actual samples of the pesticide formulation, or device. The physical sample may include the original labeled packaging, copies of or photographs of the label and all other labeling associated with the pesticide or device. Copies of any records showing the distribution or sale of the physical sample will be collected for documentary purposes. Copies of shipping records substantiating the distribution or sale of the pesticide product or device are vital to all enforcement cases (Samples usually consist of the entire container of the pesticide or device).
- < Also, often when large containers are involved or when small amounts of a pesticide are necessary for analyses, the inspector may choose to subsample the pesticide. This type of sample consists of a portion of the pesticide removed from the original container and placed in a subsample container which has been properly identified. In addition, the label

and any additional labeling and/or collateral literature and/or photographs must be documented and identified with the same number as the subsample container. The official sample consists of the physical subsample and the label/labeling and is counted as one sample.

- < Residue samples (see Chapter 13 for additional information), primarily environmental (swabs, soil, water, vegetation, etc.), are collected for a variety of reasons, but usually to determine if pesticide residues are present in the media sampled. These samples are collected in accordance with federal sampling procedures and the sample containers are identified with the sample number and the inspector's initials. Photographs should be taken of the sampling area in such a way to provide the reviewer with perspective of what the inspector did and observed in the sampling area. Photographs should be identified in the same manner and with the same number as the sampling container.
- < An induced sample should not be considered until all other sources for directly collecting the physical sample have been exhausted. Induced samples of pesticides or devices are usually requested by mail, telephone, or the internet. Complete documentation is necessary, including the original advertisement. A webpage printout may be considered advertising of the pesticide product, but your supervisor should be consulted before collecting this evidence.
- < Documentary samples are official samples collected in lieu of physical samples or when the chemistry of a pesticide is not suspect. Inspectors have some flexibility when collecting documentary samples, but should strive to collect the best evidence. In order of preference, documentary samples may consist of:
  - Photographs of the actual container observed by the inspector at the time of inspection or investigation.
  - Bin labels or specimen labels available at the inspection site, such as during producer establishment inspections, which have been authenticated by the agent-in-charge at the time of the inspection as identical to the label on the container viewed by the inspector. The authentication may be written or stamped on the reverse side of the label and/or labeling.
  - Specimen labels or other labels obtained by the inspector from sources other than at the establishment or place where the pesticide was observed. The more removed a specimen or other label is from the actual label observed, the greater the effort must be to authenticate the label. These labels must be authenticated by the agent-in-charge, suspect or witness in an official statement or affidavit as identical to the original label observed by the inspector.

- < Import samples are physical or documentary samples of pesticide formulations or devices that are offered for importation into the United States from foreign countries. Documentation for imported shipments should include U.S. Customs Service entry papers, foreign invoices, shippers' bills of lading, and records showing movement from the port of entry (Refer to Chapter 14—Pesticide Import and Export Program).
- < Use dilution samples are collected during pesticide use inspections. A formulated pesticide has been blended with a carrier such as water, and is ready to be applied by an end user.

### Sample Procedures

Immediately following the collection of a sample, the sample shall be identified, officially sealed, and documented in inspection notes, and inspection forms. Official pesticide formulation samples are normally collected only from material that is packaged, labeled, and deemed released for shipment by the manufacturer. The term "packaged, labeled, and released for shipment" refers to the point in the production and marketing of a pesticide where (a) the product has been produced, and (b) it is the intent of the producer that such product be introduced into the channels of trade.

At the producer establishment level, such intent to introduce the product into the channels of trade may be documented by 1) the producers assertions that the material being sampled is representative of what is actually sold in the marketplace, or 2) the product is stored in a loading dock, warehouse, or other area where finished goods are held before sale or distribution.

At the distributor level, in wholesale and retail marketplaces, the product is considered "released for shipment" by the producer establishment, and therefore subject to inspection and sampling.

### Small-sized units

Small-sized units are those units containing liquids of one gallon or less or solids weighing 20 pounds or less and are intended for retail distribution. Samples shall be taken from original, previously unopened shipping cases. If more than one batch or lot number is present, samples shall be taken from the predominant code or batch. If it is necessary to sample more than one batch or lot, all lots and batches shall be written on the receipt of samples to identify the lots or batches. If the labels are not identical, the inspector shall sample all sizes and submit different sizes under separate sample numbers. In addition, the inspector shall record the number of cases of each size. All non-sampled lot numbers shall be described in the Investigation Summary Narrative Report. When only a case code is evident, each sample shall also be identified with its case code. If different sized containers are present and the labels are identical, except for net contents, only one size needs to be sampled and the number of cases of each size recorded in the Establishment Inspection Report (see exhibit 7-5).

Table 9-1 shows the numbers of retail units that shall be collected. However, the inspector should consult with the laboratory if he/she is unsure or if unusual circumstances are encountered.

**Table 9-1 - Sample Sizes to Collect for Pesticide Products**

<b>Product Type</b>	<b>Quantity to Collect</b>
<b>Small-Size Units</b>	
Active Ingredients more than 1%	Collect enough units to total at least 4 oz.
Active Ingredients less than 1%	Collect enough units to total at least 4 oz.
Pressurized containers	Collect at least three units
<b>Larger Size Units (Liquids and Solids)</b>	
Active ingredients less than 10 %	Collect at least 4 oz from each of two containers*
Active ingredients more than 10%	Collect at least 4 oz. from each of two containers*
Tank Mixes	Collect at least one 4 oz. sample in addition to a 4 oz. sample of the formulation (refrigerate immediately)

\* Sample each container in duplicate if any non-uniformity is evident (i.e., layering, sediment, gross particle-size differences or color non-uniformity.)

### Larger-sized Units

Larger-sized units (formerly called “bulk samples”) are defined as those units that contain more than one gallon of liquid or weigh more than 20 pounds of solid material, and are typically offered for commercial use. Subsampling of larger containers is usually recommended for the following reasons: 1) the cost of larger amounts is frequently prohibitive; 2) the larger-sized units are difficult to handle and costly to ship; and 3) the increased amount of material left over after testing creates disposal problems.

The inspector shall subsample dry pesticides packaged in containers which are in excess of 20 pounds, and liquids packaged in containers in excess of one gallon. Special situations warrant deviations from these guidelines, in which, the entire retail unit should be sampled and submitted to the laboratory

### Dry Material

A previously unused, disposable plastic tube, available from golf equipment suppliers or home supply stores, or clean grain trier (Fisher #14-208 or equivalent) should be used for each batch or lot sampled to avoid any possibility of contamination. The tube or trier shall be clean and/or cleaned with a proper solvent and it shall

be inserted diagonally into the bag through the seam or the “dog ear” to obtain a representative sample of the material from different sections of the bag. Glass or metal (paint type) containers shall be used to contain the sample. Either a Teflon or polyethylene-lined lid may be used in conjunction with the glass containers for formulation samples.

The tube and other contaminated sampling material shall be disposed of properly and in a satisfactory manner. The trier shall be thoroughly cleaned with soap and water and or solvent, and dried before each use or reuse.

See Table 9-1 for recommended sample sizes to collect; consult with the laboratory if you are unsure.

### **Liquid Material**

A previously unused, clean, disposable plastic tubing, glass thief, or siphon shall be used for each batch or lot sampled to avoid any possibility of contamination.

If the label directions so state, the material shall be thoroughly agitated by rolling and shaking the can, barrel, or drum before sampling. Glass bottles shall always be used for sample containers. Either Teflon, or polyethylene-lined lids are satisfactory for liquid formulation samples. Do not use rubber or paper-lined lids. The tubing and other contaminated sampling material shall be disposed of properly and in a satisfactory manner. Consult with your sample analysis laboratory if you are unsure of the amount of product to sample.

A vaccutaner with siphon tube, which has a vacuum in the tube, usually used for blood sampling, can be used in some cases to sample liquid material in large containers. It is relatively easy to use, and does not have a large amount of waste to be disposed, other than the tube and sample needle that is used to puncture the end of the vaccutaner. These devices may be purchased from hospital supply stores, and are an inexpensive method of sample collection. Also, decreased exposure to the inspector from the pesticide itself may be an additional advantage for using this type of sampling container.

### **Labels**

A duplicate label, copy, or photograph of the label must accompany each sample. The label must not be removed from containers, because this will result in the pesticide being misbranded. Bin labels may be used for this purpose. The inspector must make word-for-word comparison of this label with the labeling on the container sampled to ensure that they are identical. If bin labels are not available from another source, fully legible photographs of the label are necessary. Another photograph of the entire container, showing the position of the label on the container, should also be obtained. Polaroid, instant processing, 35mm, or digital cameras may provide the word-for-word substitute for a label, if the camera can zoom in on the label language.

An inspector shall be careful to view the digital photo, if possible, to see if the image is sharp enough to obtain the word-for-word comparison of specimen and actual product labeling.

## **After Sampling**

### **Restoring Lot to Order**

The inspector shall attempt to restore a sampled lot on the premises to an orderly condition. If several cases have been opened, these containers should be backfilled and re-closed when possible. Some facilities will restore lots to order after inspectors sample and may instruct an inspector to allow them to restore the area to its presampling condition. Spillage should be cleaned up and larger containers closed, handtrucks, tools, rags, glue pots, and other supplies or equipment should be returned to their proper pre-sampling position.

### **Preparing Duplicate Samples**

If the inspected facility requests duplicate samples, they shall be collected, identified and officially sealed in the same manner as the official samples were handled. In the case of a larger sized unit, EPA defines a duplicate sample as an equal amount of the product taken in the same manner from the same container. In the case of small-sized units, a duplicate sample is defined as the same number of units taken from the same shipping containers and bearing the same batch or code numbers, if coded.

Although a company may request half the contents of a small-sized unit as their equal portion, small-sized units shall not be subdivided for the following reasons: 1) The integrity of the sample is more difficult to maintain and defend; 2) contamination during sampling is minimized; 3) the possibility of exposure to the inspector and personnel of the firm is diminished; and 4) the laboratory can conduct a net content check on the unit collected, if necessary.

### **Preparing the Receipt for Samples**

The preparation of the Receipt for Samples (EPA Form 3540-3) (Exhibit 9-1) should be self-explanatory. It is the inspector's responsibility that the facility representative understands that by signing the Receipt, he/she is acknowledging the fact that the samples and documentation were obtained from products that were packaged, labeled, and released for shipment, or having been shipped, were being held for distribution or sale. Copies of the Receipt for Samples shall be distributed as follows: 1) the Establishment Copy shall be provided to the facility; 2) the Establishment Inspection Report copy shall be attached to the inspection report; 3) the Sample Record Copy shall be attached to the Investigation Summary Report, and if a receipt covers more than one sample, it should be attached to the Investigation Summary Report bearing the lowest sample number; 4) the Collector's Copy shall be retained by the inspector.

### **Payment for Samples**

Payment shall be offered for samples collected, no matter how small the amount collected. Distributors and dealers are entitled to invoice costs plus a nominal charge (usually 10 to 15%) for freight, handling and storage. Producers are entitled to their production cost. Payment shall be made in cash; reimbursement will normally be made by a travel voucher or by petty cash. Some companies may accept a government purchase request if arranged by the facility during the inspection. A producer may elect to bill the government for the samples.

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## **SAMPLE DOCUMENTATION**

### **Responsibility**

Documentation of samples is to be accomplished in accordance with procedures outlined in this section. The inspector shall ensure that the records obtained are those covering the specific pesticide product(s) or device(s) that were sampled.

Do not remove the dealer's single copy of any record. If duplicates are not available, photocopy, photograph, or hand copy all necessary records. Reproductions shall be examined to ensure that the copy clearly contains all relevant markings. Hand copies of records on EPA forms must be accurate and legible.

All copies must be identified in the inspector's handwriting with the sample number and the inspector's initials. The inspector shall mark "EPA," the date and his or her initials in an inconspicuous manner on the reverse side of the original records from which copies were made. If the firm's record has information on both sides, the inspector's identification shall appear inconspicuously in a clear space and be circled. These procedures will ensure positive identification of the document copies in question.

For distributor-level violations, the inspector shall document the handling and storage of the sampled product, and establish the source and distribution for any accompanying literature and or labeling.

### **Records Showing Shipment**

The collection of records that document the movement of pesticides or devices in the channels of trade are integral to sample collection. These records indicate the responsible party in misbranding and/or adulteration cases and are key to shifting primary responsibility away from the retailers. In addition, since each shipment or sale of a violative pesticide constitutes a separate act, shipping records are necessary to determine the gravity of the violation(s) and are thus important in establishment of an appropriate penalty. With this in mind, when significant violations are suspected, such as but not limited to unregistered or canceled/suspended pesticides in the channels of trade and seriously misbranded pesticides with no label, directions for use missing or obscured, ingredient statement missing, illegible label,

etc., inspectors should attempt to document at least five separate shipments/sales or collect records documenting five separate days of shipments or sales whichever reveals the greater number. Invoices, transportation, shipping and/or purchase records shall be obtained for each official sample of a pesticide collected. The collection of computer generated records indicating shipments/sales of suspect pesticides is encouraged. The records must be identified in the same manner as the physical or documentary sample itself. Records collected during separate inspections or absent an official sample should be identified as an exhibit as described above. No Receipt for Samples is necessary when records alone are collected, nor is it necessary to list records collected as part of official sampling activities on the Receipt. A statement signed by the dealer, identifying both the lot sampled, and/or the applicable records. As stated above, the inspector shall have the dealer sign and initial the copies of the records obtained to prove that he/she provided them on the date of the inspection.

### **Invoices**

These documents show the seller's intent to offer the pesticide or device for sale or distribution. It may provide such information as the value of the goods, carrier, date of shipment, and other information. If duplicates or photocopies of the invoices are unavailable, the invoice shall be photographed or copied by hand on section 1, of EPA Form 3540-13, "Copy of Invoice and Shipping Record" (see Exhibit 9-2). Other records that may be substituted in the absence of an invoice are purchase orders, receiving records, canceled checks, and or correspondence.

### **Bill of Lading**

The bill of lading (BL) is made out by the shipper who delivers the goods to the carrier for shipment. It is an order for the carrier to move the goods. When the carrier's agent signs the bill of lading, he or she acknowledges receipt of the shipment. Note that the date the carrier's agent signs the BL is the date of the shipment, and this may or may not be the same date that the bill is filled out. The carrier's office in the city of origin of shipment will maintain a copy of the BL. The following information is normally found on the bill: 1) name and address of shipper, 2) name and address of consignee, 3) date of shipment, 4) name of carrier, 5) rail car number, and 6) a description of the goods. If duplicate copies or photocopies are unavailable, the inspector should obtain a photograph or hand copy the bill of lading on section 1 of EPA Form 3540-13.

### **Freight Bill**

This record is completed by the transportation company for the purpose of collecting freight charges. It should include the same information as found in the BL, plus additional information about the carrier's handling of the shipment and cost involved. Railroads prepare freight bills at their destination offices, where copies can be obtained. Steamship and airline companies usually combine the BL and freight bill into one form. Copies are filled at both the origin and destination offices of these carriers. Truck lines prepare freight bills at the originating office, and both the origin and destination

offices should have copies. The pesticide dealer will usually have a freight bill if he/she received the goods directly.

The inspector shall obtain a photograph or photocopy, or if necessary, hand copy the freight bill into section 11 of EPA Form 3540-13. The type of shipping record shall be entered in block 23 of the form. Sections 1 and 11 may be executed together on one sheet if necessary. If only one section is used, leave the other section blank and submit the entire page of Form 3540-13.

### **Waybill**

A transportation company uses a waybill in its own operations. The waybill accompanies the shipment during transit. Copies are not given to the shipper or consignee, but they can be obtained from the carrier, if necessary. Other transportation records are generally more readily available than waybills. Air freight waybill numbers are so designed that the originating line and point of origin are encoded withing the waybill number. Each airline has a numerical code description indicated by the first two digits of the number. The three subsequent letters indicate the point of origin. For example, waybill number 01LGA, designates American Airlines (01) as the carrier, and La Guardia Field (LGA) as the point of origin. Most airline offices have a copy of "Official Air Freight Transmittal Manual", which lists all the codes. Waybills may be photographed or hand copied into section 11 of EPA Form 3540-13, if duplicate copies or photocopies are unavailable.

### **Mail or Parcel Service Shipments**

*Marketplace samples* – The inspector shall attempt to obtain the original wrappings, which show cancellation of origin office and address sticker. If the original wrappings are not available, the facts concerning the shipment should be obtained from the dealer in a signed statement.

*Induced samples* – When the inspector receives an induced sample directly from mail or parcel service, the sample documentation shall include the portion of the wrapper showing name and address of the sender, the postmark, or postage meter tape or any shipping marks. A copy of the air bill or other shipping record is also to be maintained as part of the sample documentation. Other necessary records include photocopies of the money order or cancelled check, and the letter placing the order, and the original advertisement.

### **Shipments by Noncommercial Vehicle**

When shipments of a pesticide has been made by a vehicle operated by the shipper or dealer, and no commercial shipping records were made or are available, the inspector shall obtain a statement of the facts concerning the shipment. The statement will cover the facts known to him or her regarding the actual point of origin, date of shipment, the ownership and operator of the vehicle, and identification of any invoice from the shipper, or the dealer's receiving record.

## Statements and Dealer's Statements

The Dealer's Statement is obtained from persons who have dealt with the goods sampled and who know the facts relating to the movement and events that might affect their condition. These facts, recorded in writing and signed by the person who can testify in court to those facts, can be used to establish responsibility for a potential violation. The statement may be used to testify to the identity of sampled goods. Also, it can certify that the inspector collected a sample from the batch of pesticide products covered by the records. A completed Dealer's Statement, EPA Form 3540-19, is shown in Exhibit 9-3.

A statement fulfills the same function as an affidavit, but differs in that it is not given under oath. The affidavits will not normally be used by the federal inspector. Statements are normally used for marketplace samples when complete shipping records are not available to establish the origin of the material being sampled. They are also used when available literature bears pesticide claims or oral representations have been made regarding the products use, which are not on the direct labeling. Statements are also employed in use and follow-up investigations when documenting the responsibility for an apparent violation.

### Statements

The use of the Statement by inspectors during inspections and investigations is strongly encouraged and is considered mandatory in some cases. While legally considered hearsay, statements are admissible under certain circumstances as evidence in administrative proceedings. They tend to lock in a witness' testimony, they can be used to impeach testimony if a witness changes their story and can even be used in lieu of testimony in certain circumstances. While an inspector's narrative may contain the same information, the narrative is not signed by the affiant or the person providing the statement.

There is no prescribed format to be followed in composing the statement. The facts shall be arranged in an order on EPA Form 3540-42 (Exhibit 9-4). Usually, the most manageable composition will be narrative in which the events and circumstances are presented chronologically. Whatever format is used, the recorded facts must be understandable to a reader who may be unfamiliar with the situation.

When preparing the statement for signature, the inspector shall proceed as follows: 1) ascertain all the facts and record those that are material, relevant, and to which the interviewee can affirm; 2) narrate the facts in the words of the interviewee, using the first person singular; 3) break the statement down into logical paragraphs if it is long and complex; 4) positively identify the interviewee as the beginning of the statement (include the address and phone number where he or she can be reached); 5) give the interviewee's reason why he/she is qualified to make the statement; 6) set forth the pertinent facts in the body of the narrative;

7) have the interviewee read the statement and make necessary corrections before signing the affidavit/statement. (Mistakes that require correction must be initialed by the interviewee.)

The following is an example of a statement that can be used when obtaining documentary samples:

“My name is Jane Doe and I am the production manager for ABC Corp. in Chicago, IL. As such, I oversee the shipment of all products, including pesticide products, that leave the warehouse. To the best of my knowledge, the bin label for the product, Mighty Roach Killer, that was collected by Inspector Clouseau as sample number 010101-82467-001-MP, is a true and accurate representation of the label that was affixed to the product Mighty Roach Killer that was shipped on January 5, 2001, as indicated in the shipping record collected by Inspector Clouseau as sample number 010101-82467-001-MP.”

A concluding paragraph in the interviewee’s own handwriting declaring that he/she read and understood the statement is a valuable safeguard to counter the possibility that the signer might later claim he/she did not know what was being signed. A situation could arise where a product that is sampled lacks a statement on the label or labeling identifying it as a pesticide. In such a case, the inspector should include a statement that the product was purchased for intended pesticide use and is either being used or sold as a pesticide.

#### **Refusal to Sign**

After the statement has been prepared, it shall be read by the potential signatory or read to him/her before signing. If the person refuses to sign, the inspector shall elicit an acknowledgment to the effect that the statement is true and correct. He/she shall be asked to write in his/her own hand, at the bottom of the statement, “I have read this statement and it is true, but I am not signing it because....” Failing that, declare at the bottom of the statement that you recorded the above facts as the dealer revealed them, that the dealer read the statement, and the dealer avowed the statement to be true. Attempt to have any witness to the statement sign the statement with his/her name and address. A copy of the statement is to be furnished to the signatory upon request.

### **Investigation Summary Report**

An Investigation Summary Report or equivalent will be completed for each pesticide formulation sample collected. The Region will provide specific instructions on completing the appropriate form, or narrative.

#### **Memorandum to Accompany Investigation Summary Report**

Some sampling operations require additional narrative details that do not readily fit into the spaces provided on the Investigation Summary Report. Such details should be entered on a separate memorandum titled “Memorandum to Accompany Investigation

Summary Report Sample No. XYZ.” A copy of this memorandum must be attached to each copy of the Investigation Summary Report.

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## SAMPLE PREPARATION, CUSTODY, AND HANDLING

### Identification of Samples and Labels

Each sample is to be identified in the inspector's handwriting with the date, sample number, and the inspector's initials in the form: date(mmddyy) - inspector's number - inspection sequence - inspector's initials (e.g. 010101-82467-001-MP). This information is written with permanent ink (e.g. Sharpie® Permanent Marker) on the container so as to not obscure any portion of the label(ing) or package. When more than one unit is collected, each unit shall be identified further with a subnumber or letter. This identification is normally placed in conjunction with the date, sample number and initials in the form: date (mmddyy) - inspector's number - inspection sequence - sample sequence - inspector's initials (e.g. 010101-82467-001-002-MP). All collateral labeling, including circulars, and inner instruction sheets, shall be similarly identified. Circulars that have been removed from the sample for identification shall be reinserted into the original packages.

Additionally, when identifying larger size unit samples, unless identical bin labels are not available, make a hand-written label for each subsample that provides at least the following information for the safety of those who will handle the sampled product: 1) brand name of the product, 2) principal active ingredients and labeled concentrations in percent, 3) company or name and address as shown on label, 4) distinguishing marks or code numbers, and 5) labels should be stamped in red ink with “poison” and skull and crossbones if the product's label was so marked (poison labels must also be affixed to the outside of the sample bag) and 6) the EPA Registration Number if present.

The above instructions would also apply to all small-sized samples that are wrapped and sealed in such a way as to obscure the product's label. Copies of appropriate bin labels can be taped to each container, if available, in lieu of the above information.

### Identification of Documents

#### Records

All copies of sample records obtained at the establishment must be identified in the inspector's handwriting with the sample number, date, and the inspector's initials. This identification shall appear as close to the upper right corner as possible.

#### Accompanying Literature, Labeling, Photographs, and Exhibits

This material shall be identified in the inspector's handwriting with the sample number, date, and initials. Do not mark on the face of photographs. All identification marks shall be on the border of the photograph. Each photograph shall be identified as to which panel

of label it represents (i.e., front panel, back panel, left side, or right side panel, etc.). A photograph showing the entire label and its placement on the container shall be submitted. If it is a black and white photo, a notation of the color of the warning statement shall be made on the photograph. The source of any accompanying labeling or literature collected is to be identified in the Investigation Summary Report (or equivalent narrative).

#### **Physical Sample Custody**

Samples are prepared by placing the sample(s) in an inverted clear polyethylene bag (4 mil thickness), twisting the top of the bag to tie a knot, turning the excess amount of bag over the knot, and taping the excess bag below the knot. It is important that the sample label be readable through the plastic bag. Each glass unit is to be sealed in a separate bag. In addition to ensuring custody, the polyethylene bag provides some degree of containment in case of breakage or leakage.

#### **Preparing the EPA Official Sample Seal**

Physical samples are officially sealed by placing a completed EPA Official Sample Seal (EPA Form 7500-2) (Exhibit 9-5) with the signature of inspector, sample number, date, and name and title of inspector printed. There is also space for a Regional Office location to be noted on the form.

#### **Applying the EPA Official Sample Seal**

The Official Sample Seal is then placed just below the knot in the poly-bag. The folded down portion of the poly-bag should be twisted below the knot and perhaps be taped with masking tape or mono-filament type tape below the knot to ensure closure. The completed Official Sample Seal is then placed around the tape by meeting both ends and applying pressure toward the knot to form the Seal. If it becomes necessary to break an official seal, it is to be removed from the bag and properly initialed and dated. The broken seal is then mounted on a piece of paper and submitted with the collection report to provide a continuous history. The sample must then be officially resealed with a newly completed EPA Official Sample Seal.

#### **Sample Integrity and Sample Custody**

Sample integrity and sample custody are initiated and documented from the point of collection to the transfer of the physical sample to the laboratory custodian. Sample integrity describes the securing of the sample (both physical and documentary) and the placing of the sample(s) under conditions that will not compromise their chemical and/or physical integrity. Sample custody describes the action of and formal documentation - **chain of custody record** - on maintaining security and condition of the samples so that there is absolutely no doubt in the validity of the evidence collected. Following collection, documentation, and initiation of chain-of-custody, samples must be stored in a secure area prior to transfer to the laboratory. Pesticide product samples can be transferred to the laboratory, in order of preference, either by: 1) direct personal transfer, 2) common air or ground carrier (e.g., UPS, FedEx, motor freight trucking company, etc.), or 3) U.S. Postal Service.

Regardless of which method is employed for samples transfer, several requirements need to be followed:

a) glass containers must never be packaged directly against each other, either within the same plastic bag or within the shipping container; b) the sample label, whether for a prepackaged unit or for subsampled material, should always be readable through the plastic bag; c) liquid samples should not be packaged with solids in the same outer shipping container; d) a copy of the Investigation Summary Report or equivalent form should be included with the samples, protected in a protective bag or sleeve; and e) the laboratory director or designee should be notified by telephone that the samples are being shipped, the mode of transfer, and the expected arrival date.

## Mode of Transfer

### Hand Delivery

Hand delivery to the laboratory is the preferable method of sample transfer. The only requirements, beyond those mentioned previously, are that 1) the transfer be accomplished in a timely manner, 2) the sample be preserved, if necessary, and 3) all sample transfers are documented on the custody record, or Chain-Of-Custody Form (Exhibit 9-6). Other authorized individuals may act as intermediates in transferring official samples to the testing laboratory as long as all such transfers are fully documented with respect to dates and signatures on the Chain-Of-Custody form.

### Common Carrier

If pesticide formulation or related samples cannot be hand-delivered to the laboratory, the services of a commercial shipping or overnight package firm (either surface or air) are preferred over use of the U.S. Postal Service for reasons of timeliness. However, transportation by commercial means is tightly regulated by the U.S. Department of Transportation (DOT) particularly concerning the conveyance of hazardous materials, which includes many pesticides.

DOT requires that persons responsible for working with hazardous materials (hazmat) must have hazmat training.

Because of the continuing changing nature of the DOT regulations, in 40 CFR Parts 100 to 177, the pesticide inspector is advised to obtain the latest edition of these regulations to ensure full knowledge of pertinent additions and deletions. Many pesticides are listed in the Hazardous Materials Table in 49 CFR 172.101, or are listed according to their hazardous properties as being poisons, oxidizers, corrosives, flammables, or pressurized gases.

In most cases the pesticide label can be used to identify the hazard category, as the EPA Pesticide Registration Division classification system is almost identical to that being used by DOT. The DOT table cites the appropriate labeling, maximum quantity that can be shipped per package, and specific CFR requirements and exemptions for packaging. The Hazardous Materials table also contains an appendix which gives the reportable quantities for certain materials.

These are quantities that must be reported on the shipping papers, if appropriate, to meet USEPA reportable release requirements.

For quick reference the following DOT documents have been reproduced to assist the inspector in insuring compliance with DOT regulations: 1) Hazardous Materials Definitions (Exhibit 9-7), 2) Guide for Shippers, Exhibit 9-8, 3) Guide for Hazardous Materials Shipping Papers, (Exhibit 9-9).

The two major parcel service companies, United Parcel Service and Federal Express, each have toll free numbers to assist the inspector in the use of their services for transporting hazardous materials.

Federal Express.....1-800-463-3339

United Parcel Service.....1-800-322-1333

American Labelmark also has a toll-free number (800-621-5808) to provide advice on shipping hazardous materials, as well as serving as a source of packaging materials, containers, and labels. There are many mail for profit firms which now provide similar services, such as Mail Plus. They may be a source of materials for this work..

Pesticide formulations that do not fall under any of the hazardous categories may be shipped as unrestricted. However, packaging should at least meet the requirements of the DOT ORM-A classification (49 CFR 173.505).

**U.S. Postal Service**

Except in emergencies, the U.S. mail should only be used to transfer small quantities of nonhazardous solid pesticides formulations to the laboratory, such as antimicrobial pesticides of low concentration (below 5%). The mail service has not proven reliable in the past to ensure safe and timely delivery on a sustained basis. In addition, specific restrictions exist on the mailability of poisons, flammables, oxidizers, and corrosives, which are spelled out in the USPS Mailability of Hazardous Materials document (Exhibit 9-10).

**Exhibit 9-1: Receipt for Samples (EPA Form 3540-3)**

 <p>UNITED STATES ENVIRONMENTAL PROTECTION AGENCY</p> <p><b>RECEIPT FOR SAMPLES</b></p>		ADDRESS ( <i>EPA Regional Office</i> )  DATE
NAME OF INDIVIDUAL		TITLE
FIRM NAME		FIRM ADDRESS ( <i>Number, Street, City, State, and ZIP Code</i> )
SAMPLE NUMBERS		
SAMPLES COLLECTED ( <i>Describe fully, List Registration, Lot, Batch, Model, Serial Numbers, and other positive identification</i> ) The following samples were collected by the U.S. Environmental Protection Agency and receipt is hereby acknowledged pursuant to Section 9(a) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136 g). This section is quoted on the reverse of this form.		
ACKNOWLEDGEMENT OF PRODUCER/REGISTRANT The undersigned acknowledges that the samples shown above were obtained from pesticides or devices that were packaged, labeled, and released for shipment.		
SIGNATURE ( <i>Owner, Operator, or Agent</i> )		TITLE ( <i>Owner, Operator, or Agent</i> )
<input type="checkbox"/> DUPLICATE SAMPLES REQUESTED AND PROVIDED		<input type="checkbox"/> DUPLICATE SAMPLES NOT REQUESTED
AMOUNT PAID FOR SAMPLES \$		SAMPLES WERE <input type="checkbox"/> PURCHASED <input type="checkbox"/> BORROWED <input type="checkbox"/> CASH <input type="checkbox"/> VOUCHER <input type="checkbox"/> TO BE BILLED <input type="checkbox"/> NO CHARGE
NAME OF COLECTOR ( <i>print or type</i> )	TITLE OF COLECTOR	SIGNATURE OF COLECTOR

EPA FORM 3540-3 (Rev. 01-01)

PREVIOUS EDITION MAY BE USED  
UNTIL SUPPLY IS EXHAUSTED

1. Original - ESTABLISHMENT COPY
2. EIR COPY
3. SAMPLE RECORD COPY
4. COLLECTOR'S COPY

**Sec. 9. [136g] Inspection of Establishments, Etc**

**(a) In General.**

(1) For purposes of enforcing the provisions of this Act, officers or employees of the Environmental Protection Agency or of any State duly designated by the Administrator are authorized to enter at reasonable times:

(A) any establishment or other place where pesticides or devices are held for distribution or sale for the purpose of inspecting and obtaining samples of any pesticides or devices, packaged, labeled, and released for shipment, and samples of any containers or labeling for such pesticides or devices.

(B) any place where there is being held any pesticide the registration of which has been suspended or canceled for the purpose of determining compliance with section 19.

(2) Before undertaking such inspection, the officers or employees must present to the owner, operator, or agent in charge of the establishment or other place where pesticides or devices are held for distribution or sale, appropriate credentials and a written statement as to the reason for the inspection, including a statement as to whether a violation of the law is suspected. If no violation is suspected, an alternate and sufficient reason shall be given in writing. Each such inspection shall be commenced and completed with reasonable promptness. If the officer or employee obtains any samples, prior to leaving the premises, the officer or employee shall give to the owner, operator, or agent in charge a receipt describing the samples obtained and, if requested, a portion of each such sample equal in volume or weight to the portion retained. If an analysis is made of such samples, a copy of the results of such analysis shall be furnished promptly to the owner, operator, or agent in charge.

Exhibit 9-2: Copy of Invoice and Shipping Record (EPA Form 3540-13)

 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY <b>COPY OF INVOICE AND SHIPPING RECORD</b>		1. SAMPLE NO.			
		2. LOCATION	3. INSPECTOR'S NAME	4. DATE COLLECTED	
SECTION I - COPY OF INVOICE					
5. SHIPPER ( <i>Name, Street, City, State, and ZIP code</i> )			6. SHIPPED FROM		
7. SOLD TO ( <i>Name, Street, City, State, and ZIP code</i> )			8. SHIPPED TO ( <i>If other than Item 7</i> )		
9. INVOICE NO.	10. INVOICE DATE	11. SHIPPED VIA	12. DATE OF SHIPMENT		
13. QUANTITY	14. UNIT SIZE	15. DESCRIPTION OF ARTICLE(S)	16. UNIT PRICE	17. TOTAL	
18. GUARANTEE			19. TOTAL ▶		
SECTION II - COPY OF SHIPPING RECORD					
20. SHIPPER ( <i>Name, Street, City, State, and ZIP code</i> )			21. SHIPPED TO ( <i>Name, Street, City, State, and ZIP code</i> )		
22. CARRIER ( <i>Name, Street, City, State, and ZIP code</i> )					
23. TYPE OF RECORD	24. RECORD NO.	25. RECORD DATE	26. CAR OR EQUIPMENT NO.	27. WAYBILL DATE & NO.	
28. SHIPPED FROM ( <i>City and State</i> )			29. DATE SHIPPED	30. OTHER CARRIERS	
31. DESCRIPTION OF ARTICLE(S)		32. NO. PKGS	33. WEIGHT	34. RATE	35. CHARGES
36. RECEIVED BY		37. DATE REC'D	38. TOTALS		

EPA FORM 3540-13 (Rev. 01-01)

PREVIOUS EDITIONS MAY BE USED

Exhibit 9-3: Dealer's Statement (EPA Form 3540-19)

 <p style="font-size: small;">UNITED STATES ENVIRONMENTAL PROTECTION AGENCY</p> <h2 style="margin: 0;">DEALER'S STATEMENT</h2>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; height: 30px;">DATE PREPARED</td> <td style="width: 50%;">SAMPLE NO.</td> </tr> <tr> <td colspan="2" style="height: 30px;">WHERE SAMPLE COLLECTED <i>(City and State)</i></td> </tr> </table>	DATE PREPARED	SAMPLE NO.	WHERE SAMPLE COLLECTED <i>(City and State)</i>	
DATE PREPARED	SAMPLE NO.				
WHERE SAMPLE COLLECTED <i>(City and State)</i>					
<p>This certifies that the sample consisting of _____</p> <p>_____</p> <p>collected by Inspector _____ on _____</p> <p>was from shipment(s) received by us from _____</p> <p>_____</p> <p>on _____ and was identified to the Inspector</p> <p>by _____ of this firm;</p> <p>That the (copy of) invoice(s) No. _____</p> <p>dated _____</p> <p>_____</p> <p>and (copy of) shipping record(s) No. _____</p> <p>dated _____</p> <p>_____</p> <p>issued by _____</p> <p>_____</p> <p>which were identified by _____</p> <p>and furnished to the Inspector, cover this (these) shipment(s).</p> <p>REMARKS _____</p> <p>_____</p> <p>_____</p> <p>_____</p>					
<p>PRICE PAID</p> <p>\$ _____</p> <p>CASH <input type="checkbox"/>      BILLED <input type="checkbox"/></p> <p>VOUCHER <input type="checkbox"/>      NO CHARGE <input type="checkbox"/></p>	<p>DEALER FIRM <i>(Name and Address)</i></p> <p>_____</p> <p>_____</p> <p>SIGNATURE</p> <p>_____</p> <p>TITLE</p> <p>_____</p>				

Exhibit 9-4: Statement (EPA Form 3540-42)

 <p style="text-align: center; margin: 0;">UNITED STATES ENVIRONMENTAL PROTECTION AGENCY</p> <p style="text-align: center; font-size: 1.2em; font-weight: bold; margin: 10px 0 0 0;">STATEMENT</p>	<p style="font-size: 0.8em; margin: 0;">SAMPLE NO.</p> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <p style="font-size: 0.8em; margin: 0;">COUNTY</p>	<p style="font-size: 0.8em; margin: 0;">STATE</p> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <p style="font-size: 0.8em; margin: 0;">CITY</p>
<p style="margin: 0;">I hereby swear/affirm that the foregoing statement is true to the best of my knowledge.</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%; border-top: 1px solid black; text-align: center; font-size: 0.8em;">SIGNATURE</div> <div style="width: 45%; border-top: 1px solid black; text-align: center; font-size: 0.8em;">TITLE</div> </div>		
<p style="font-size: 0.8em; margin: 0;">INDIVIDUAL OR FIRM'S NAME AND ADDRESS <i>(Include ZIP code and telephone number)</i></p>		
<p style="font-size: 0.8em; margin: 0;">Subscribed and sworn to before me at <i>(City and State)</i> _____</p> <p style="font-size: 0.8em; margin: 5px 0 0 0;">this _____ day of _____, 20 ____</p>		
<p style="font-size: 0.8em; margin: 0;">_____ SIGNATURE OF EPA REPRESENTATIVE</p>		

**Exhibit 9-5: EPA Official Sample Seal (EPA Form 7500-2)**

 <p>UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  <b>UNITED STATES ENVIRONMENTAL PROTECTION AGENCY          OFFICIAL SAMPLE SEAL</b></p>	SAMPLE NO.	DATE	SEAL BROKEN BY	DATE
	SIGNATURE			
	PRINT NAME AND TITLE <i>(Inspector, Analyst or Technician)</i>			

EPA FORM 7500-2(R7-75)



### Exhibit 9-7: Hazardous Materials Definitions

The following definitions have been abstracted from the Code of Federal Regulations, Title 49, Transportation, Parts 100-199. Refer to the referenced sections for complete details. Note: In column (1), 49 CFR 172.101, Hazardous Materials Table, the (+) fixes the proper shipping name and hazard class. The name and class do not change whether the material meets or does not meet the definition of that class. (49 CFR 172.101(b)(1)).

**HAZARDOUS MATERIAL** - A substance or material, including a hazardous substance, which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. (See 49 CFR 171.8).

**MULTIPLE HAZARDS** - A material meeting the definition of more than one hazard class and must be classed according to its position on the list in 49 CFR 173.2(a). For example, a material that meets the definition of a flammable liquid and an irritating material would be classed as a flammable liquid.

<b>DOT HAZARD CLASS</b>	<b>UN CLASS</b>	<b>DEFINITION</b>
EXPLOSIVES		An Explosive is any chemical compound, mixture, or device which is designed to function by explosion, that is substantially instantaneous with the release of gas and heat. Exception--such compound, mixture, or device which is otherwise specifically classified in 49 CFR Parts 171-180. (See 49 CFR 173.50)
EXPLOSIVES CLASS A	1	Detonating. Maximum Hazard. The nine types of Class A explosives are defined in 49 CFR 173.53.
EXPLOSIVES CLASS B	1	Flammable Hazard. In general, functions by rapid combustion rather than detonation. Included are explosive devices such as special fireworks, flash powders, etc. (49 CFR 173.88)
EXPLOSIVES CLASS C	1	Minimum hazard. Small arms ammunition, certain types of fireworks and various types of manufactured articles containing restricted quantities of Class A and/or Class 11 explosives as components. Included are common fireworks and various types of small arms ammunition manufactured articles which contain restricted quantities of Class A or Class B explosives. (49 CFR 173.100)
BLASTING AGENT	1	Blasting Agent. A material designed for blasting which has been tested in accordance with 49 CFR 173.114(a)(b). It must be so insensitive that there is very little probability of: (1) accidental explosion or (2) going from burning to detonation. (49 CFR 173.114a(a))
GASES Compressed Gas	2	Any material or mixture having in-the-container an absolute pressure exceeding

<b>DOT HAZARD CLASS</b>	<b>UN CLASS</b>	<b>DEFINITION</b>
GASES Non-liquified Compressed Gas	2	A gas (other than gas in solution) which, under the charged pressure, is entirely gaseous at a temperature of 70°F. (49 CFR 173.300(c))
GASES Liquefied Compressed Gas	2	A gas which, under the charged pressure, is partially liquid at a temperature of 70-F. (49 CFR 173.300(d))
GASES Compressed Gas in solution	2	A non- liquified compressed gas which is dissolved in a solvent. (49 CFR 173.300(e))
GASES Flammable Compressed Gas	2	Any compressed gas meeting criteria as specified in 49 CFR 173.300(a) and (1)). This includes: lower flammability limit, flammability limit range, flame projection, or flame propagation.
Nonflammable Gas	2	Any compressed gas other than a flammable compressed gas.
FLAMMABLE LIQUID	3	Any liquid having a flash point below 100°F. Authorized methods to determine flashpoints are listed in 49 CFR 173.115(d). For exceptions, see 49 CFR 173.115(a).
FLAMMABLE LIQUID Pyrophoric Liquid	3	Any liquid that ignites spontaneously in dry or moist air at or below 130°F. (49 CFR 173.115(c))
COMBUSTIBLE LIQUID	3	Any liquid that does not meet any other hazard class, other than ORM-E, having a flash point at or above 100°F. and below 200°F. For exceptions, see 49 CFR 173.115(b). Authorized methods to determine flashpoints are listed in 49 CFR 173.115(d). Exceptions are found in 49 CFR 173.118(a).
FLAMMABLE SOLID	4	Any solid material (other than an explosive) which under normal transportation conditions is liable to cause fires through friction or retained heat from manufacturing or processing. It can, be ignited readily and burns so vigorously and persistently, as to create a serious transportation hazard. Included in this class are spontaneously combustible and water reactive material. (49 CFR 173.150)

<b>DOT HAZARD CLASS</b>	<b>UN CLASS</b>	<b>DEFINITION</b>
FLAMMABLE SOLID Spontaneously Combustible Material (solid)	4	A solid substance (including sludges and pastes) which may undergo spontaneous Treating or self-ignition under normal transportation conditions. These materials may increase in temperature and ignite when exposed to air. (49 CFR 171.8)
FLAMMABLE SOLID Water Reactive Material (solid)	4	Any solid substance (including sludges and pastes) which react with water by igniting or giving off dangerous quantities of flammable or toxic gases. (49 CFR 171.8)
ORGANIC PEROXIDE	5	Any organic compound containing the bivalent -0-0- structure. It may be considered a derivative of hydrogen peroxide where one or more of the hydrogen atoms have been replaced by organic radicals. It must be classed as an organic peroxide unless it meets certain criteria listed in 49 CFR 173.151(a).
OXIDIZER	5	A substance such as chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter. (49 CFR 173.151)
POISON A Extremely Dangerous Poisons, Poisonous gases or liquids	2	A very small amount of the gas, or vapor of the liquid, mixed with air is dangerous to life. (49 CFR 173.326)
POISON Less Dangerous Poisons	6	Substances, liquid or solid (including pastes and semi-solids), other than Class A Poisons or Irritating Materials--so toxic (or presumed to be toxic) to man that they are a hazard to health during transportation. (49 CFR 173.343(a))
IRRITATING MATERIAL	6	A liquid or solid substance which, upon contact with fire or air, gives off dangerous or intensely irritating fumes. It does not include any poisonous material, Class A.(49 CFR 173.381)
ETIOLOGIC AGENT	6	A living micro- organism (or its toxin) which causes (or may cause) human disease, and includes those agents listed in 49 CFR 72.3.(49 CFR 173.386)
RADIOACTIVE MATERIAL	7	Any material, or combination of materials, that spontaneously gives off ionizing radiation. It has a specific activity greater than 0.002 microcuries per gram. (49 CFR 173.403)(See 49 CFR 173.403(a) through (z) for details.)

<b>DOT HAZARD CLASS</b>	<b>UN CLASS</b>	<b>DEFINITION</b>
CORROSIVE MATERIAL	8	A liquid or solid that causes visible destruction or irreversible damage to human skin tissue on contact. Also, it may be a liquid that has a severe corrosion rate on steel. (See 49 CFR 173.240 (a) and (b) for details.)
ORM-OTHER REGULATED MATERIALS	9	(1) Any material that may pose an unreasonable risk to health, safety, and property when transported in commerce; and (2) does not meet any of the definitions of the other hazard classes specified in this subchapter, or (3) has been reclassified an ORM (specifically or permissively) according to this subchapter. (49 CFR 173.500(a))
ORM-A	9	Material which has an anesthetic, irritating, noxious, toxic, or other similar property. If the material leaks during transportation, passengers and crew would experience extreme annoyance and discomfort. (49 CFR 173.500(b)(1))
ORM-B	9	A material, (including a solid when wet with water), the leakage of which could cause significant damage to the vehicle transporting it. Materials meeting one or both of the following criteria are ORM-it materials: (1) specifically designated by name in 49 CFR 172.101 and/or (2) a liquid substance that has a corrosion rate exceeding 0.250 inch per year(IPY) on non-clad aluminum. An acceptable test is described in NACE Standard TM-01-69.(49 CFR 173.500(b)(2))
ORM-C	9	A material which has other inherent characteristics not described as an ORM-A or ORM-B, but which make it unsuitable for shipment, unless properly identified and prepared for transportation. Each ORM-C material is specifically named in 49 CFR 172.101. (49 CFR 173.500(b)(3))
ORM-D	9	A material such as a consumer commodity which presents a limited hazard during transportation due to its form, quantity and packaging. It must be a material for which exceptions are provided in 172.101. Shipping descriptions applicable to ORM-D materials are found in 49 CFR 172.101. (49 CFR 173.500(b)(4))
ORM-E		A material that is not included in any other hazard class but is subject to the requirements of this subchapter. Materials in this class include: (1) HAZARDOUS WASTE and (2) HAZARDOUS SUBSTANCES, as defined in 49 CFR 171.8. (49 CFR 173.500(b)(5))

THE FOLLOWING ARE OFFERED TO EXPLAIN SOME OF THE ADDITIONAL TERMS USED IN PREPARATION OF HAZARDOUS MATERIALS FOR SHIPMENT. (49 CFR 171.8)

**CONSUMER COMMODITY** - A material that is packaged or distributed in a form intended or suitable for sale through retail sales agencies. The material is for use by individuals for personal care or household use. This term also includes drugs and medicines. (49 CFR 171.8).

**FLASH POINT** - The minimum temperature at which the flammable vapors of a substance (in contact with a spark or flame) will ignite. For liquids, see 49 CFR 173.115. ],or solids, see 49 CFR 173.150.

**FORBIDDEN** - A material that is prohibited from being offered or accepted for transportation. This Prohibition does not apply if these materials are diluted, stabilized, or incorporated in devices AND they are classed in accordance with Part 173 of the subchapter. (See 49 CFR 172.101 (d)(1)).

**HAZARDOUS SUBSTANCE** - A material, including its mixtures and solutions, that: (1) is listed in the Appendix to 172.101; (2) is in a quantity, in one package, which equals or exceeds the reportable quantity (RQ) listed in the Appendix to 49 CFR 172.101; (3) when in a mixture or solution for radionuclides conform to the appendix to 172.101, Table 2 is in a concentration by weight, which equals or exceeds the concentration corresponding to the RQ of the material as shown in the table of the "hazardous substance" definition in 49 CFR 171.8. This definition does not apply to petroleum products that are lubricants or fuels. (See 40 CFR 300.6).

**HAZARDOUS WASTE** - Any material that is subject to the Hazardous Waste Manifest Requirements or the U.S. Environmental Protection Agency specified in the CFR Title 40, Part 262. For answers to questions regarding EPA hazardous waste regulations, call 1- 800-424-9346 in Washington, DC.

**LIMITED QUANTITY** - The maximum amount of a hazardous material authorized for specific labeling and packaging exceptions. Consult the section applicable to the particular hazard class. See 49 CFR 173.118, 173.118(a), 173.153, 173.244, 173.306, 173.345, and 173.364.

## Exhibit 9-8: Guide for Shippers

### USE OF GUIDE

This Guide is presented as an aid to shippers of hazardous materials. It does not contain or refer to all of the DOT requirements for shipping hazardous materials. For specific details, refer to all of the DOT requirements for shipping hazardous materials. For specific details, refer to the Code of Federal Regulations (CFR), Title 49, Transportation, Parts 100-199.

The following is offered as a step-by-step procedure to aid in compliance with the applicable DOT Regulations.

#### STEP 1 - DETERMINE THE PROPER SHIPPING NAME

The shipper must determine the proper shipping name of the materials as listed in the Hazardous Materials Table, 49 CFR 172.101, Column (2).

#### STEP 2 - DETERMINE THE HAZARD CLASS OR CLASSES

- A. Refer to the Table, 49 CFR 172.101, Column (3) and locate the hazard class of the material.
- B. If more than one class is shown for the proper shipping name, determine the proper class by definition.
- C. If the materials have more than one hazard, classify the material based on the order of hazards in 49 CFR 173.2.

#### STEP 3 - SELECT THE PROPER IDENTIFICATION NUMBERS

- A. Refer to the Table, 49 CFR 172.101, Column (3a) and select the Identification Number (ID) that corresponds to the proper shipping name and hazard class.
- B. Enter the ID number(s) on the shipping papers and display them, as required, on packagings, placards and/or orange panels.

#### STEP 4 - DETERMINE THE MODE(S) OF TRANSPORT TO ULTIMATE DESTINATION

- A. As a shipper, you must assure yourself that the shipment complies with various modal requirements.
- B. The modal requirements may affect the following: (1) Packaging; (2) Quantity per Package; (3) Marking; (4) Labeling; (5) Shipping papers; (6) Certification.

#### STEP 5 - SELECT THE PROPER LABEL(S) AND APPLY AS REQUIRED

- A. Refer to the Table, 49 CFR 172.101, Column (4) for required labels.
- B. For details on labeling refer to: (1) Additional Labels, (3) Packagings (Mixed or Consolidated), 49 CFR 172.404(a) and (b); (4) Packages Containing Samples, 49 CFR 172.402(h); (5) Radioactive Materials, 49 CFR 172.403; and, (6) Authorized Label Modifications, 49 CFR 172.405.

## STEP 6 - DETERMINE AND SELECT THE PROPER PACKAGES

A. Refer to the Table, 49 CFR 172.101, column 5(a) for exceptions and Column (5b) for specification packagings.

Consider the following when selecting an authorized package: Quantity per package; Cushioning material, if required; Proper closure and reinforcement; Proper pressure; Outage; etc. as required.

B. If packaged by a prior shipper, make sure the packaging is correct and in proper condition for transportation.

## STEP 7 - MARK THE PACKAGING (INCLUDING OVERPACKS)

A. Apply the required markings (49 CFR 172.300); Proper shipping name and ID number, when required (49 CFR 172.301); Name and address of Consignee or Consignor (49 CFR 172.306).

B. For details and other required markings, see 49 CFR 172.300 through 172.338.

## STEP 8 - PREPARE THE SHIPPING PAPERS

A. The basic requirements for preparing shipping papers include: Proper Shipping name; Hazard class; ID number, Total quantity; Shipper's certification; and emergency response telephone number.

B. Make all entries on the shipping papers using the information required and in proper sequence (49 CFR 172.202).

C. For additional requirements, see 49 CFR 172.200 through 172.205.

## STEP 9 - CERTIFICATION

A. Each shipper must certify by printing (manually or mechanically) on the shipping papers that the materials being offered for shipment are properly classified, described, packaged, marked and labeled, and in proper condition for transportation according to the applicable DOT Regulations (49 CFR 172.204).

B. For surface shipments; see 49 CFR 172.204(a) and (b); for air shipments, see 49 CFR 172.204(c).

## STEP 10 - LOADING, BLOCKING AND BRACING

When loading hazardous materials into the transport vehicle or freight container, each package must be loaded, blocked and braced in accordance with the requirements for mode of transport.

A. If the shipper loads the freight container or transport vehicle, the shipper is responsible for the proper loading, blocking, and bracing of the materials.

B. If the carrier does the loading, the carrier is responsible.

## STEP 11 - DETERMINE THE PROPER PLACARD(S)

Each person who offers hazardous materials for transportation must determine that the placarding requirements have been met.

A. For Highway, unless the vehicle is already correctly placarded, the shipper must provide the required placard(s) and required ID number(s) (49 CFR 172.506).

B. For Rail, if loaded by the shipper, the shipper must placard the rail car if placards are required. (49 CFR 172.508)

C. For Air and Water shipments, the shipper has the responsibility to apply the proper placards.

STEP 12 - HAZARDOUS WASTE/HAZARDOUS SUBSTANCE

- A. If the material is classed as a hazardous waste or hazardous substance, most of the above steps will be applicable.
- B. Pertinent Environmental Protection Agency Regulations are found in the Code of Federal Regulations, Title 40, Part 262.

AS A FINAL CHECK AND BEFORE OFFERING THE SHIPMENT FOR TRANSPORTATION, VISUALLY INSPECT YOUR SHIPMENT. THE SHIPPER SHOULD ENSURE THAT EMERGENCY RESPONSE INFORMATION IS ON THE VEHICLE FOR TRANSPORTATION OF HAZARDOUS MATERIALS.

## Exhibit 9-9: Guide For Hazardous Materials Shipping Papers

### USE OF GUIDE

This Guide is designed for in-house use when reviewing hazardous material shipping paper requirements. However, this document should not be used to determine compliance with the U.S. DOT Hazardous Materials Regulations (HMR).

### DEFINITIONS

**Shipping Paper** - (49 CFR 171.8) A shipping paper is a shipping order, bill of lading, manifest, or other shipping document serving a similar purpose and containing the information required by 49 CFR 172.202, 172.203 and 172.204.

**Hazardous Waste Manifest** - (40 CFR 262.20) A hazardous waste manifest is a document (shipping paper) on which all hazardous waste is identified. A copy of the manifest must accompany each shipment of waste from the point of pick-up to the destination. For waste shipments, the hazardous waste manifest satisfies DOT shipping paper requirements, if all DOT requirements for shipping papers are met. (49 CFR 172.205)

### SHIPPER'S RESPONSIBILITY (49 CFR 172.200(a))

The person offering a hazardous material for transport has the responsibility to Properly prepare the shipping paper. (See also 49 CFR 173.22.)

### GENERAL ENTRIES ON SHIPPING PAPERS (49 CFR 172.201)

Contents - When describing a hazardous material on a shipping paper, that description must conform to the following requirements:

- (1) When a hazardous material and other materials are both described on the same shipping paper, the hazardous material description entries:
  - (a) Must be entered first, or
  - (b) Must be entered in a contrasting color (or highlighted in a contrasting color - for reproduced copies of the shipping paper only), or
  - (c) Must be identified by the entry "X" placed before the proper shipping name in a column captioned "IIM." The "X" may be replaced by "RQ" (Reportable Quantity), if appropriate. (See Figure I on following page.)
- (2) The required shipping description on the original shipping paper and all copies must be legible and printed (manually or mechanically) in English.
- (3) The required description may not contain any code or abbreviation, unless it is specifically authorized or required, such as "UN," United Nations, "NA," North America, or "Ltd Qty," Limited Quantity.
- (4) A shipping paper may contain additional information concerning the material provided that the information is not inconsistent with the required description. The additional information must be placed after the basic description required by 49 CFR 172.202(a)(4).

(a) When appropriate, the entries "IMO" or "IMO Class" may be entered immediately before or immediately following the class entry in the basic description.

(b) If a material meets the definition of more than one hazard class, the additional hazard class(es) may be entered after the hazard class in the basic description.

NOTE: The International Civil Aviation Organization (ICAO) issues the "Technical Instructions for the Safe Transport of Dangerous Goods by Air" for the international transportation of goods by air.

The International Maritime Organization (IMO) issues the "International Maritime Dangerous Goods Code (IMDG)" for the international transportation of hazardous materials by water.

The terms "dangerous goods" and "hazardous materials" are considered synonymous.

Name of Shipper - A shipping paper for a shipment by water must contain the name of the shipper.

Emergency Response Telephone Number - A shipping paper must contain an emergency response telephone number, as required by 49 CFR, Subpart G of Part 172.

#### HAZARDOUS MATERIALS DESCRIPTION (49 CFR 172.202)

The shipping description of a hazardous material on a shipping paper must include the following information:

**Proper Shipping Name** - The name prescribed for material in 49 CFR 172.101 Hazardous Materials Table or 172.102 Optional IIMT MAY NOT BE ABBREVIATED. (49 CFR 172.202 (a)(1)).

**The Hazard Class of the Material** - The class prescribed for material in 49 CFR IIM Table 172.101 or 172.102 Optional IIMT. (See 49 CFR 172.202(a)(2).)

**The Identification Number** - The number prescribed in the IIM Table 172.101 or 172,102 Optional table for the material (preceded by "UN" or "NA," as appropriate). (49 CFR 172.202(a)(3))

**The Total Quantity By Weight (net or gross, as appropriate) or volume, including the unit of measure, of the hazardous material, except for empty packaging, cylinders of compressed gases, and packaging of greater than 110 gallon capacity.** (49 CFR (172.202 (a)(4))

Except as otherwise provided in the regulations, the basic description specified in 172.202 (a)(t),(2), and (3) must be in the sequence shown. For example: "Acetone, Flammable liquid, UN 1090." (49 CFR 172.202(b)).

The total quantity of the material covered by one description must appear before or after (or both before and after) the basic description. (49 CFR 172.202(c)).

(1) Abbreviations may be used to specify the type of packaging and units of measure of the total quantity. For example: 10 ctns. Paint, flammable Liquid, UN 1263, 500 lbs. (49 CFR 172.202(c)(1)).

(2) Type of packaging and destination marks may be entered in any appropriate manner before or after the basic description. (49 CFR 172.202(c)(2)).

## ADDITIONAL DESCRIPTION REQUIREMENTS (49 CFR 172.203) (ALL MODES)

Exemptions - Each shipping paper issued in connection with shipment made under an exemption must bear the notation "DOT-E" followed by the exemption number adjacent to the description to which the exemption applies. (49 CFR 172.203 (a))

Limited Quantities - Descriptions for materials offered as "Limited Quantities" must include the words "Limited Quantities" or "Ltd Qty" following the basic description. (49 CFR 172.203(b))

Hazardous Substances (49 CFR 172.203(c))

(1) If the proper shipping name (for a material that is a hazardous substance) does not identify the hazardous substance by name, the following shall be entered, in parentheses, in association with the basic description:

(a) Name of the hazardous substance from the Appendix to the 49 CFR 172.101 Hazardous Materials Table, or

(b) For waste streams, the waste stream number (A "waste stream" is a hazardous waste liquified, sludge, solid, gas] continuously generated from a manufacturing process. Such waste will be listed in either 49) CFR 261.31 or 40 CFR stream number-), or

(c) For wastes exhibiting an EPA characteristic of ignitability, corrosivity, reactivity, or EPA toxicity the letters "EPA" followed by the word "ignitability," "corrosivity," "reactivity," or "EI" toxicity" or the corresponding "I)" number, as appropriate.

(2) The letters "RQ" (Reportable Quantity) shall be entered on the shipping paper either before or after the basic description required by 49 CFR 172.202 for each hazardous substance.(See definition in 49 CFR 171.8). Example: "RQ, Cresol, Corrosive UN 2076"; or "Hazardous Substance, Solid, n.o.s., ORM-E, NA 9188 (Adipic Acid), RQ."

Radioactive Materials - For additional description requirements for radioactive materials, refer to 49 CFR 172.203(d).

## Exhibit 9-10: Mailability of Hazardous Materials

### Summary

This document describes the standards, restrictions, and prohibitions for mailing hazardous materials, such as explosives, gasses, flammable and combustible liquids, flammable solids, oxidizing substances, organic peroxides, toxic and infectious substances, radioactive materials, and corrosives. It also provides information on package markings, shipping papers, and warning labels. *Note:* Full responsibility rests with the mailer to comply with all postal and nonpostal laws and regulations regarding the mailing of hazardous materials.

### 1.0 GENERAL

#### 1.1 Definitions

The following definitions apply:

- a. *Hazardous material* is any article or substance designated by the U.S. Department of Transportation (DOT) as being capable of posing an unreasonable risk to health, safety, and property during transportation. In international commerce, hazardous material is known as dangerous goods.
- b. *Limited quantity* is the maximum amount of a specific hazardous material that is exempted from the labeling or packaging requirements in 49 CFR. Not every hazardous material is eligible to be shipped as a limited quantity.
- c. *ORM-D (Other Regulated Material) material* is a limited quantity of a hazardous material that presents a limited hazard during transportation due to its form, quantity, and packaging. In almost all instances, the proper shipping name for an ORM-D material is consumer commodity. Not all hazardous material permitted to be shipped as a limited quantity can qualify as an ORM-D material.
- d. *Consumer commodity* is a hazardous material that is packaged and distributed in a quantity and form intended or suitable for retail sale and designed for consumption by individuals for their personal care or household use purposes. This term can also include certain drugs or medicines. Not all hazardous material permitted to be shipped as a limited quantity can qualify as a consumer commodity.
- e. *Air transportation*, for the purposes of this section only, applies to all mailable hazardous materials sent at First-Class Mail, Priority Mail, or Express Mail rates (see 1.9).
- f. *Surface transportation*, for the purposes of this section only, applies to all mailable hazardous materials sent at Standard Mail rates.
- g. *Primary receptacle* is the container (e.g., tube, vial, bottle) that holds the hazardous material.
- h. *Secondary packaging* is the container into which a primary receptacle is placed.
- i. *Outer packaging* is the container into which a primary receptacle and secondary packaging, together with absorbent material and cushioning, are placed. The outer packaging bears the addressing information along with all required markings.

#### 1.2 U.S. Department of Transportation

The U.S. Department of Transportation regulates the surface and air carriage of Transportation hazardous materials within the United States via any means of transportation. DOT regulations on hazardous materials are codified in Title 49, *Code of Federal Regulations* (49 CFR), parts 100-185. Postal mailing standards for hazardous materials adhere to 49 CFR and often include additional limitations and prohibitions.

Generally, postal standards restrict the mailing of hazardous materials to ORM-D materials that meet the postal volume limitations for the appropriate hazard class.

**Exhibit 1.3 DOT Hazard Classes and Mailability Summary**

<b>Class</b>	<b>Hazard Class Name and Division (if applicable)</b>	<b>Domestic Mail Air Transportation</b>	<b>Domestic Mail Surface Transportation</b>	<b>International Mail</b>
1	<b>Explosives</b> Division 1.1 Mass Explosive Hazard Division 1.2 Projection Hazard Division 1.3 Fire Hazard and/or Minor Blast/Minor Projection Hazard Division 1.4 Minor Blast Hazard Division 1.5 Very Insensitive With Mass Explosion Hazard Division 1.6 Extremely Insensitive With No Mass Explosion Hazard	Prohibited	Prohibited except with written permission as allowed in 2.2	Prohibited
2	<b>Gases</b> Division 2.1 Flammable Gases Division 2.2 Nonflammable, Nontoxic Gases Division 2.3 Toxic Gases	Division 2.1 and 2.3: Prohibited Division 2.2: Only ORM-D material per 3.3	Divisions 2.1, 2.2: Only ORM-D material per 3.3 Division 2.3: Prohibited	Prohibited
3	<b>Flammable and Combustible Liquids</b>	Flammable liquids: Prohibited Combustibles: Only ORM-D material per 4.3	Flammable liquids: Only ORM-D material per 4.2 Combustibles: Only ORM-D material per 4.3	Prohibited
4	<b>Flammable Solids</b> Division 4.1 Flammable Solids Division 4.2 Spontaneously Combustible Division 4.3 Dangerous When Wet	Prohibited	Only ORM-D material per 5.2	Prohibited
5	<b>Oxidizing Substances, Organic Peroxides</b> Division 5.1 Oxidizing Substances Division 5.2 Organic Peroxides	Only ORM-D material per 6.2	Only ORM-D material per 6.2	Prohibited
6	<b>Toxic Substances and Infectious Substances</b> Division 6.1 Toxic Substances Division 6.2 Infectious Substances	Division 6.1: Only ORM-D material per 7.2 Division 6.2: Only per 8.0	Division 6.1: Only ORM-D material per 7.2 Division 6.2: Only per 8.0	Division 6.1: Prohibited Division 6.2: Only mailable per IMM 135

Class	Hazard Class Name and Division (if applicable)	Domestic Mail Air Transportation	Domestic Mail Surface Transportation	International Mail
7	Radioactive Materials	Prohibited	Only in limits per 9.0 and Publication 52	Only mailable in limits per IMM 135
8	Corrosives	Only in ORM-D material per 10.2	Only in ORM-D material per 10.2	Prohibited
9	Miscellaneous Hazardous Materials	Only in ORM-D material per 11.0	Only in ORM-D material per 10.2	Only in ORM-D material per 10.2

### 1.3 Hazard Class

Every hazardous material is assigned to one of nine hazard classes identified in 49 CFR 172.101 and 173. Some hazard classes are further separated into divisions based on their physical or chemical properties. For postal purposes, Exhibit 1.3 generally summarizes the mailability of hazardous materials by hazard class.

### 1.4 Mailer Responsibility

Full responsibility rests with the mailer to comply with all postal and nonpostal laws and regulations regarding the mailing of hazardous materials. Anyone who mails, or causes to be mailed, a nonmailable or improperly packaged hazardous material can be subject to legal penalties, including but not limited to those specified in 18 USC.

### 1.5 Mailability Rulings

Generally, the acceptability for mailing chemicals and other types of hazardous materials depends on container fluid/vapor capacities, the ability of the complete package to contain the material, and the method of absorbing and containing the product in case of accidental leakage of the primary receptacle. To determine mailability of a specific material, a mailer must submit a material safety data sheet (MSDS) and the following information to the appropriate rates and classification service center (RCSC):

- a. Name of material, hazard class, and assigned United Nations (UN) or North America (NA) identification number.
- b. Chemical composition by percentage of ingredient.
- c. Flashpoint.
- d. Toxic properties.
- e. Irritant action when inhaled, swallowed, or contacted by eyes or skin.
- f. Special precautions necessary to permit handling without harm to USPS employees or damage to property or other mail.
- g. Explanation of warning labels and shipping papers required by State or federal regulations.

- h. Proposed packaging method, including the addressing and required markings.
- i. Proposed number of pieces to be mailed, class of mail, and post office(s) of mailing.

## **1.6 Warning Labels**

With few exceptions as noted in these standards, most hazardous materials acceptable for mailing fall within the Other Regulated Materials (ORM-D) regulations of CFR 49 173.144, which do not require DOT hazard class warning labels. Except for division 6.2 materials under 8.3 and dry ice under 11.4, any hazardous material bearing or required to bear a DOT hazard class warning label under the requirements in 49 CFR is prohibited from mailing. Mailable ORM-D material must be marked as required in 1.7. Mailable hazardous material must bear DOT handling labels (e.g., orientation arrows, magnetized materials) when applicable.

## **1.7 Package Markings**

Each mailpiece containing a mailable hazardous material must be plainly and durably marked on the address side with the required shipping name and UN identification number. The UN identification number is not required on a mailpiece that contains an ORM-D material. A mailable ORM-D material must be marked on the address side with "ORM-D" or "ORM-D AIR," as applicable, immediately following or below the proper shipping name. The proper shipping name for a mailable ORM-D material is consumer commodity. Mailable ORM-D material sent via surface transportation must be marked on the address side as "Surface Mail Only."

## **1.8 Shipping Papers**

For domestic surface transportation, a mailpiece containing a mailable hazardous material, except for an ORM-D material or a specimen mailed under 8.4, must be accompanied by a shipping paper prepared under 49 CFR 172.200 through 172.205. For domestic air transportation, a mailpiece containing a mailable hazardous material, except for a specimen mailed under 8.4, must be accompanied by a shipper's declaration for dangerous goods (i.e., shipping paper) completed and signed in triplicate by the mailer. The shipping paper must be affixed to the outside of the mailpiece.

## **1.9 Air Transportation Prohibitions**

All mailable hazardous materials sent at First-Class Mail, Priority Mail, or Express Mail rates are subject to the limitations that apply to air transportation. The following types of hazardous materials are prohibited from transport via aircraft:

- a. Anything susceptible to damage or that can become harmful because of changes in temperature or atmospheric pressures unless protected against the effects of such changes.
- b. Magnetic materials that have a field strength sufficient to cause a compass deviation at a distance of 15 feet (4.6 meters) or more from any point on the outer packaging.
- c. Flammable materials (gases, liquids, and solids).
- d. Radioactive materials.
- e. Materials excluded from air shipment by DOT regulations (49 CFR 1-185) or of the applicable State (country) or air carrier operator variations. Certain restricted articles, as described in 49 CFR 100-185 and the operator variations of the air carriers, may be accepted for air transportation if properly packaged. These articles must be labeled and bear a shipper's declaration in triplicate, as required by 49 CFR 172.204, or must be marked according to the air carrier's operator variations. Refer to the technical instruction of the International Civil Aviation Organization (ICAO) for air carrier operator variations.

## 2.0 EXPLOSIVES (HAZARD CLASS 1)

### 2.1 Definition

An *explosive* is any substance, article, or device that is designed to function by explosion (i.e., an extremely rapid release of gas and heat) or that, by chemical reaction within itself, is able to function in a similar manner even if not designed to function by explosion, unless the substance or article is otherwise classed under the provisions in 49 CFR. Hazard class 1 has six divisions as shown in Exhibit 1.3. No further explanation of the six divisions is provided in these standards because explosives are prohibited in the mail except as permitted in 2.2.

### 2.2 Mailability

Explosives are prohibited in international mail. Explosives are prohibited in the domestic mail via air transportation. For domestic surface transportation, explosives are prohibited except for certain division 1.4 toy propellant devices and safety fuses specifically approved by the Mail Preparation and Standards manager, USPS Headquarters, before mailing. A mailable explosive must meet the packaging and marking requirements provided with the Manager's approval. A shipping paper is required.

## 3.0 GASES (HAZARD CLASS 2)

### 3.1 Definition

Hazard class 2 consists of three divisions:

a. *Division 2.1, Flammable Gases.* A material that is a gas at 68°F (20°C) or less and 14.7 psi (101.3 kPa) of pressure. Flammable gases also include materials that have a boiling point of 68°F (20°C) or less at 14.7 psi (101.3 kPa) and that are ignitable at 14.7 psi (101.3 kPa) when in a mixture of 13% or less by volume with air or that have a flammable range at 14.7 psi (101.3 kPa) with air of at least 12% regardless of the lower limit. These conditions must be established in accordance with ASTM E681-85, Standard Test Method for Concentration Limits of Flammability of Chemicals, or other approved equivalent method. The flammability of aerosols must be determined using the tests specified in 49 CFR 173.306(i).

b. *Division 2.2, Nonflammable, Nontoxic Gases.* A material that does not meet the definition of division 2.1 or 2.3 and exerts in its packaging an absolute pressure of 40.6 psia (280 kPa) or greater at 68°F (20°C).

c. *Division 2.3, Toxic Gases.* A material that is poisonous by inhalation and is a gas at 68°F (20°C) or less and a pressure of 14.7 psi (101.3 kPa) or a material that has a boiling point of 68°F (20°C) or less at 14.7 psi (101.3 kPa).

### 3.2 Mailability

Gases are prohibited in international mail. Toxic gases in division 2.3 are prohibited in domestic mail. Flammable gases in division 2.1 are prohibited in domestic mail via air transportation, but are permitted via surface transportation if the material can qualify as an ORM-D material and meet the standards in 3.3 and 3.4. Nonflammable gases in division 2.2 are generally permitted in the domestic mail via air or surface transportation if the material can qualify as an ORM-D material and meet the standards in 3.3 and 3.4.

### 3.3 Container

An other-than-metal container of a mailable gas may be acceptable if the water capacity of the container is 4 fluid ounces (7.22 cubic inches) or less per mailpiece and the container meets 49 CFR requirements. Mailable nonflammable and flammable compressed gases are acceptable in metal inside containers that have a water capacity up to 33.8 fluid ounces (1 liter or 61.0 cubic inches), depending on their internal pressure. A DOT 2P container must be used if the internal pressure is from 140 to 160 psig at 130°F (55°C). A DOT 20 container must be used if the pressure is from 161 to 180 psig at 130°F (55°C). A container with an internal pressure over 180

psig at 130/°F (55/°C) is prohibited from mailing. Mailable flammable compressed gases are restricted to 33.8 fluid ounces (1 liter) per mailpiece. Mailable nonflammable compressed gases are permitted in individual 33.8 fluid ounce (1 liter) containers that may be securely packed within a single mailpiece up to a weight of 66 pounds (30 kg) per 49 CFR 173.306.

### 3.4 Marking

For surface transportation, packages of mailable gases must be clearly marked on the address side with "Surface Mail Only" and "ORM-D" immediately following or below the proper shipping name (consumer commodity). For air transportation, packages must be plainly and durably marked on the address side with "ORM-D AIR" immediately following or below the proper shipping name and must also bear a shipper's declaration for dangerous goods.

## 4.0 FLAMMABLE AND COMBUSTIBLE LIQUIDS (HAZARD CLASS 3)

### 4.1 Definitions

The terms used in the standards that apply to hazard class 3 are defined as follows:

a. *Flammable liquid* means a liquid that has a flashpoint of not more than 141/°F (60.5/°C), or any material in a liquid phase that has a flashpoint at or above 100/°F (38/°C).

b. *Combustible liquid* means any liquid that does not meet the definition of any other hazard class and has a flash point above 141/°F (60.5/°C) and below 200/°F (93/°C). Note: A flammable liquid with a flashpoint at or above 100/°F (38/°C) that does not meet the definition of any other hazard class may be reclassified as a combustible liquid per 49 CFR 173.120(b).

### 4.2 Flammable Liquid Mailability

Flammable liquid is prohibited in international mail. Flammable liquid with a flashpoint of 20/°F (-7/°C) or below is prohibited in domestic mail. Other flammable liquid is prohibited in domestic mail via air transportation but is permitted via surface transportation if the material can qualify as an ORM-D material and meet the following conditions as applicable:

a. The flashpoint is above 20/°F (-7/°C) but no more than 73/°F (23/°C); the liquid is in a metal primary receptacle not exceeding 1 quart, or in another type of primary receptacle not exceeding 1 pint, per mailpiece; enough cushioning surrounds the primary receptacle to absorb all potential leakage; the cushioning and primary receptacle are packed within a securely sealed secondary packaging that is placed within a strong outer packaging; and each mailpiece is plainly and durably marked on the address side with "Surface Mail Only" and "ORM-D" immediately following or below the proper shipping name.

b. The flashpoint is above 73/°F (23/°C) but less than 100/°F (38/°C); the liquid is in a metal primary receptacle not exceeding 1 gallon, or in another type of primary receptacle not exceeding 1 quart, per mailpiece; enough cushioning surrounds the primary receptacle to absorb all potential leakage; the cushioning and primary receptacle are placed within a securely sealed secondary packaging that is placed within a strong outer packaging; and each mailpiece is plainly and durably marked on the address side with "Surface Mail Only" and "ORM-D" immediately following or below the proper shipping name.

### 4.3 Combustible Liquid Mailability

Combustible liquid is prohibited in international mail. Combustible liquid is permitted in domestic mail if the material can qualify as an ORM-D material and meet the following conditions as applicable:

a. For surface transportation, if the flashpoint is 100/°F (38/°C) but no more than 141/°F (60.5/°C); the liquid is in a metal primary receptacle not exceeding 1 gallon, or In another type of primary receptacle not exceeding 1 quart,

per mailpiece; enough cushioning surrounds the primary receptacle to absorb all potential leakage; the cushioning and primary receptacle are packed in a securely sealed secondary packaging that is placed within a strong outer packaging; and each mailpiece is plainly and durably marked on the address side with "Surface Mail Only" and "ORM-D" immediately following or below the proper shipping name.

b. For surface or air transportation, if the flash point is above 141°F (60.5°C) but no more than 200°F (93°C); the liquid is in a primary receptacle not exceeding 1 gallon per mailpiece; enough cushioning surrounds the primary receptacle to absorb all potential leakage; the cushioning and primary receptacle are packed in a securely sealed secondary packaging that is placed within a strong outer packaging; and each mail piece is plainly and durably marked on the address side with "ORM-D" or "ORM-D AIR," as applicable, immediately following or below the proper shipping name. Mailable material sent via surface transportation must be marked on the address side as "Surface Mail Only." For air transportation, each mail piece must bear a shipper's declaration for dangerous goods.

c. For air or surface transportation without restriction, if the flash point is above 200°F (93°C). Mailable combustible liquids must be properly and securely packaged to prevent leakage.

#### 4.4 Cigarette Lighters

A cigarette lighter equipped with an ignition element and containing fuel is a Class 3 flammable liquid. A cigarette lighter that contains a flammable gas is classed as a division 2.1 flammable gas. A cigarette lighter containing either flammable liquid or flammable gas is permitted only in domestic mail via surface transportation when all of the following conditions are met:

a. The design of the lighter and its packaging are approved by the DOT Associate Administrator for Hazardous Material Safety, per 49 CFR 173.21 (i) and 173.308; and a DOT Approval Number (T -Number) is issued.

b. The prospective mailer of the lighter submits to the appropriate RCSC manager a written request for authorization to mail the lighter, accompanied by a legible photocopy of the official DOT notice conveying the approval described in 4.4a and a specimen of the actual lighter, the packaging materials in which each lighter is to be mailed, the number of mail pieces and mailing location; and the mailer receives from the RCSC manager a letter approving the requested authorization for mailing.

c. When presented for mailing, the address side of the mailpiece containing the lighter prominently displays the T -Number, the proper shipping name "Lighter for Cigarette," and the marking "Surface Mail Only"; all preparation and packaging requirements in the RCSC manager's approval letter are met; and a legible photocopy of the RCSC manager's approval letter accompanies the mailing.

## 5.0 FLAMMABLE SOLIDS (HAZARD CLASS 4)

### 5.1 Definitions

Hazard class 4 consists of three divisions:

a. *Division 4.1, Flammable Solids.* Any solid material other than one classed as an explosive that, under conditions normally incident to transportation, is likely to cause fires through friction or retained heat from manufacturing or processing, or that can be ignited readily and, when ignited, burns so vigorously and persistently as to create a serious transportation hazard.

b. *Division 4.2, Spontaneously Combustible.* A liquid or solid pyrophoric material that even in small amounts and without an external ignition source can ignite within 5 minutes after coming in contact with air, or a self-heating material that, when in contact with air and without an energy supply, is liable to self-heat.

c. *Division 4.3, Dangerous When Wet.* A material that, by contact with water, is likely to become spontaneously flammable or to give off flammable or toxic gas at a rate greater than 1 liter per kilogram of the material per hour.

## 5.2 Mailability

Flammable solids are prohibited in international mail. Flammable solids are prohibited in domestic mail via air transportation. A flammable solid that can qualify as an ORM-D material is permitted in domestic mail via surface transportation if the material is contained in a secure primary receptacle having a weight of 1 pound or less; the primary receptacle(s) is packed in a strong outer packaging with a total weight of 25 pounds or less per mailpiece; and each mail piece is plainly and durably marked on the address side with "Surface Mail Only" and "ORM-D" immediately following or below the proper shipping name.

## 5.3 Matches

Matches are classified as flammable solids. Strike-anywhere matches are prohibited in international and domestic mail. Safety matches (book, card, or strike-on-box) are prohibited in international mail, and in domestic mail via air transportation, but are permitted in domestic mail via surface transportation if:

- a. They do not ignite spontaneously under conditions normally incident to transportation or when subjected for 8 consecutive hours to a temperature of 220°F (93°C).
- b. They cannot be readily ignited by friction unless struck on their own or a similar box, card, or book.
- c. They are tightly packed in a securely sealed inner packaging to prevent any shifting or movement that could cause accidental ignition by rubbing against adjoining items. The inner packaging(s) is placed securely within an outer container made of fiberboard, wood, or other equivalent material. Multiple inner packagings may be placed in a single outer packaging. The address side of the mail piece is marked "Surface Mail Only" and "Book Matches," "Strike-on-Card Matches," or "Card Matches," as appropriate. A shipping paper is required.
- d. The gross weight of each mail piece is not more than 50 pounds.

## 6.0 OXIDIZING SUBSTANCES, ORGANIC PEROXIDES (HAZARD CLASS 5)

Hazard class 5 consists of two divisions:

- a. *Division 5.1, Oxidizing Substances.* A material that may, generally by yielding oxygen, cause or enhance the combustion of other materials.
- b. *Division 5.2, Organic Peroxides.* Any organic compound that contains oxygen in the bivalent structure and that may be considered a derivative of hydrogen peroxide, where one or more of the hydrogen atoms have been replaced by organic radicals.

### 6.1 Definition

Oxidizing substances and organic peroxides are prohibited in international mail. For domestic mail, a material that can qualify as an ORM-D material is permitted via air or surface transportation. Liquid materials must be enclosed within a primary receptacle having a capacity of 1 pint or less; the primary receptacle(s) must be surrounded by absorbent cushioning material and held within a secondary leak-resistant container that is packed within a strong outer packaging. Solid materials must be contained within a primary receptacle having a weight capacity of 1 pound or less; the primary receptacle(s) must be surrounded with cushioning material and packed within a strong outer packaging. Each mailpiece may not exceed a total weight of 25 pounds. The address side of each mailpiece must be plainly and durably marked with "ORM-D AIR" or "ORM-D," as applicable, immediately following or below the proper shipping name.

## 6.2 Mailability

A mailable class 5 material sent via surface transportation must be marked "Surface Mail Only" on the address side. A mailable material sent via air transportation must bear a shipper's declaration for dangerous goods.

## 7.0 TOXIC SUBSTANCES (HAZARD CLASS 6, DIVISION 6.1)

### 7.1 Definitions

The terms used in the standards for division 6.1 material are:

a. *Toxic substance* is a poisonous material, other than a gas, that is known to be so toxic to humans as to cause death, injury, or harm to human health if swallowed, inhaled, or contacted by the skin.

b. *Oral toxicity* applies to a liquid with a lethal dose (LD<sub>50</sub>) for acute oral toxicity of not more than 500 mg/kg or a solid with an LD<sub>50</sub> for acute oral toxicity of not more than 200 mg/kg that when administered by mouth is likely to cause death within 14 days in half of the test animals.

c. *Dermal toxicity* applies to a material with an LD<sub>50</sub> for acute dermal toxicity of not more than 1,000 mg/kg that when administered by continuous contact with bare skin is likely to cause death within 14 days in half of the test animals.

d. *Inhalation toxicity* applies to a dust or mist with a lethal concentration (LC<sub>50</sub>) for acute inhalation toxicity of not more than 10 mg/L; or a saturated vapor concentration in air at 68°F (20°C) of more than one-fifth of the LC<sub>50</sub> for acute toxicity on inhalation of vapors and with an LC<sub>50</sub> for acute inhalation toxicity of vapors of not more than 5,000 *mV/m<sup>3</sup>*; that when administered by continuous inhalation for 1 hour is likely to cause death within 14 days in half of the test animals.

e. *Irritating material* is any liquid or solid substance (e.g., tear gas) that gives off intense fumes and causes extreme irritation and impairment to a person's ability to function.

### 7.2 Mailability

Toxic substances or poisons are prohibited in international mail. For domestic mail, a division 6.1 toxic substance or poison that can qualify as an ORM-D material is permitted when packaged under the applicable requirements in 7.4. Certain other poisonous materials are permitted to be mailed only between the authorized parties and under the conditions in 7.3.

### 7.3 Authorized Parties

A division 6.1 toxic substance having an LD<sub>50</sub> for oral toxicity of greater than 5mg/kg but less than or equal to 50 mg/kg is mailable only if packaged under the applicable requirements in 7.4 and when sent between authorized parties and under specified conditions, as follows:

a. Toxic substances for scientific use (not outwardly or of their own force dangerous or injurious to life, health, or property) may be sent only between manufacturers, dealers, bona fide research or experimental scientific laboratories, and employees of federal, state, or local governments who have official use for such poisons and are designated by the agency head to receive or send such poisons. For air transportation, a shipper's declaration for dangerous good is required.

b. Poisonous drugs and medicines may be sent only from the manufacturer or dealer of the drugs and medicines to licensed physicians, surgeons, dentists, pharmacists, druggists, cosmetologists, barbers, and veterinarians (18 USC 1716).

## 7.4 Packaging and Marking

The following requirements must be met, as applicable:

- a. A toxic substance that can qualify as an ORM-D material and does not exceed a total capacity of 8 ounces per mailpiece is permitted if: the material is held in an inner receptacle(s); enough cushioning material surrounds the primary receptacle to absorb all potential leakage; the cushioning and primary receptacle(s) are packed in another securely sealed secondary packaging that is placed within a strong outer packaging. Each mail piece must be plainly and durably marked on the address side with "ORM-D" or "ORM-D AIR," as applicable, immediately following or below the proper shipping name. Mailable material sent via surface transportation must be marked on the address side as "Surface Mail Only."
- b. Other toxic substances and poisons are permitted to be sent between the authorized parties and under the conditions in 7.3 when they do not exceed 8 ounces per mailpiece and if: the material is held in a leak-resistant primary receptacle(s); sufficient absorbent and cushioning material completely surround each primary receptacle; the primary receptacle(s) and the absorbent and cushioning materials are firmly held within a secondary leakproof (for liquids) or siftproof (for solids) packaging; the secondary packaging is firmly and securely held within a strong outer packaging of 200-pound grade corrugated fiberboard or equivalent strength. The address side of each mailpiece must be marked with the proper shipping name and UN (or NA) identification number of the material (unless exempted by CO24.11.2). Mailable materials sent via surface transportation must be marked on the address side as "Surface Mail Only." Each mailpiece must bear a shipping paper.

## 7.5 Irritating Material

Irritants are prohibited in international mail and domestic mail.

## 8.0 INFECTIOUS SUBSTANCES (HAZARD CLASS 6, DIVISION 6.2)

### 8.1 General

Infectious substances (i.e., etiologic agents), clinical specimens, and biological products are not permitted in international mail or domestic mail, except when they are intended for medical or veterinary use, research, or laboratory certification related to public health; and when it is determined that such items are properly prepared for mailing to withstand shocks, pressure changes, and other conditions incident to ordinary handling in transit. Mailable infectious substances sent as international mail must meet the standards in *International Mail Manual* (IMM) 135. For domestic mail, mailable infectious substances must meet the applicable standards in 8.0.

### 8.2 Definitions

The terms used in the standards for division 6.2 material are:

- a. *Infectious substance* (etiologic agent) means a viable microorganism, or its toxin, that causes or may cause disease in human beings or animals, and includes those agents listed in 42 CFR 72.3 and any other agent that causes or may cause severe, disabling, or fatal disease. The terms infectious substance and etiologic agent are synonymous.
- b. *Clinical (diagnostic) specimen* means any human or animal material including, but not limited to, excreta, secretions, blood, blood components, tissue, and tissue fluids, collected and being shipped for purposes of diagnosis.
- c. *Biological product* means a material derived from a living organism that is prepared and manufactured in accordance with 9 CFR 102-104 (licenses for biological products; experimental products, distribution, and evaluation prior to licensing; and permits for biological products), 21 CFR 312 (investigational new drug application), or 21 CFR 600-680 (biologics) and that, under such provisions, may be shipped in interstate commerce. Biological products include, but are not limited to, products such as vaccines.

d. *Sharps* means any item of medical waste having a projecting cutting edge or fine point that was used in animal or human patient care or treatment or in medical research or industrial laboratories. The term includes, but is not limited to, hypodermic needles, syringes (with or without the attached needles), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of the presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides or cover slips. The term does not include new unused medical devices such as hypodermic needles, syringes, and scalpel blades.

e. *Other medical devices* means all materials or devices used in animal or human patient care or treatment or in medical research that are not, or do not contain, a projecting sharp and are not known or not reasonably believed to contain an infectious substance (etiologic agent).

### 8.3 Packaging Infectious Substances (Etiologic Agents)

Packaging for all infectious substances (etiologic agents) is subject to these standards:

a. All infectious substances, clinical specimens, and biological product known or reasonably believed to contain an etiologic agent must meet the packaging requirements of 42 CFR 72.3 and must not exceed 50 ml per mailpiece. The primary receptacle or the secondary packaging must be capable of withstanding, without leakage, an internal pressure that produces a pressure differential of not less than 14 psi (95 kPa) and temperature in the range of -40/°F to 131/°F (-40/°C to 55/°C) as required by 49 CFR 173.196.

b. The material must be packaged in a securely sealed and watertight primary receptacle (test tube, vial, etc.) that is enclosed in another securely sealed, watertight, and durable secondary packaging. Several primary receptacles may be enclosed in a single secondary packaging if there is adequate shock-absorbent material between them to prevent breakage during ordinary handling and if the total liquid volume of all enclosed primary receptacles does not exceed 50 ml.

c. The space between the primary receptacle(s) and the secondary packaging at the top, bottom, and sides must contain enough material to absorb the entire content of the primary receptacle(s) in case of breakage or leakage.

d. The primary receptacle(s) and the secondary packaging must be enclosed in an outer packaging constructed of fiberboard or other equivalent material. No external surface of the outer packaging may be less than 3.9 inches (100 mm) as required by 49 CFR 173.196.

e. Each mailpiece must be designed and constructed so that, if it were subject to the environmental and test conditions in 49 CFR 178.609, there would be no release of the content to the environment and no significant reduction in the effectiveness of the packaging.

f. The address side of the mailpiece must bear the "Etiologic Agents/Biohazard Material" label required by 42 CFR 72.3(d) and must be sent by Express Mail, Priority Mail, or First-Class Mail. Those specific etiologic agents listed in 42 CFR 72.3(f) must be sent registered mail. Each mailpiece must be marked on the address side with the proper shipping name and UN number of the material (e.g., "Infectious Substances Affecting Humans, UN2814," or "Infectious Substances Affecting Animals, UN2900"). Each mailpiece must bear a DOT Class 6 label for infectious substances (etiologic agents), proper UN package specification markings, and orientation markings.

g. Articles that include dry ice as a refrigerant for the infectious substance must meet the requirements of 42 CFR 72.3(c) and 49 CFR 173.196(e)(2)(ii).

## 8.4 Packaging Clinical Specimens and Biological Products

A clinical specimen or biological product known or reasonably believed to contain an infectious substance (etiologic agent) must be packaged under 8.3. The packaging of a clinical specimen (e.g., a urine or blood specimen used in drug-testing programs or for insurance purposes) or a biological product (e.g., polio vaccine) that is not known or not reasonably believed to contain an infectious substance (etiologic agent) is subject to these packaging standards:

a. *Not Exceeding 50 ml.* A clinical specimen or biological product consisting of 50 ml or less per mail piece must be packaged in a securely sealed primary receptacle. Sufficient shock-resistant material to withstand shock and pressure changes and absorbent material must surround the primary receptacle, or be otherwise configured to take up the content in case of leakage. The primary receptacle and the absorbent cushioning must be enclosed in a secondary packaging having a leakproof barrier that can prevent failure of the secondary packaging should there be leakage of the primary receptacle during shipment. The secondary packaging may serve as the outer packaging.

b. *Exceeding 50 ml.* In addition to meeting the requirements in 8.4a, a clinical specimen or biological product that exceeds 50 ml per mail piece also is subject to these requirements:

(1) A single primary receptacle must not contain more than 1,000 ml of specimen; two or more primary receptacles whose combined volume does not exceed 1,000 ml may be enclosed in a single secondary packaging.

(2) The secondary packaging cannot serve as the outer packaging; the secondary packaging must be enclosed in a fiberboard box or container of equivalent strength; the maximum amount of a specimen that may be enclosed in a single outer packaging must not exceed 4,000 ml.

c. *Markings.* Mailable material must be marked as specified in 8.7.

## 8.5 Sharps

The types of used sharps waste defined in 8.2d are permitted for mailing only using merchandise return service (see 8923) in conjunction with First-Class Mail or Priority Mail, subject to these standards:

a. *Authorization.* Each distributor or manufacturer of a complete sharps mailing kit or packaging assembly, including containers, cartons, and any other related material to be used to mail sharps to a storage or disposal facility, must obtain authorization from the U8P8. Before applying for authorization, each type of mailing kit must be tested and certified against the standards in 8.5d by an independent party. A written request for authorization is sent to the Mail Preparation and Standards manager, U8P8 Headquarters (see G043 for address). The request must contain the following:

(1) A \$50,000 surety bond or letter of credit as proof of sufficient financial responsibility to cover disposal costs if the manufacturer (or distributor) ceases doing business before all its shipping containers are disposed of, or to cover cleanup costs if spills occur while the containers are in U8P8 possession.

(2) Address of the headquarters or general business office of the distributor or manufacturer.

(3) Address of each disposal and storage site.

(4) List of all types of mailing kits to be covered by the request, a complete sample of each mailing kit, and proof of package testing certifications performed by the independent testing facility that subjected the packaging materials to the testing requirements in 8.5d.

(5) Copy of the proposed manifest to be used with all mailings. (6) 24-hour telephone number for emergencies.

(7) List of the types of sharps waste to be mailed for disposal.

b. *Packaging.* The packaging for used sharps waste and unsterilized containers is subject to these standards:

(1) Used sharps waste must be packaged in a securely sealed, leak-resistant, and puncture-resistant primary receptacle that may not contain more than 50 ml of residual waste liquid. The primary receptacle must maintain its integrity when exposed to temperatures between 0° and 120°F.

(2) The primary receptacle must be packaged within a watertight secondary packaging or containment system. The secondary packaging may consist of more than one component. If one of the components is a plastic bag, it must be at least 3.0 mils thick and reinforced with a fiberboard sleeve having a minimum thickness of 40-point. A plastic bag by itself does not meet the requirement for a secondary packaging. Several primary receptacles may be enclosed in a secondary packaging.

(3) The secondary packaging must be enclosed in an outer packaging or shipping container constructed of 200-pound grade corrugated fiberboard or similar material of equivalent strength. The secondary packaging must fit securely within the outer packaging to prevent breakage during ordinary processing.

(4) There must be enough material within a watertight barrier to absorb and retain three times the total liquid allowed within the primary receptacle (150 ml per primary receptacle) in case of leakage.

(5) Each mailpiece must not weigh more than 35 pounds.

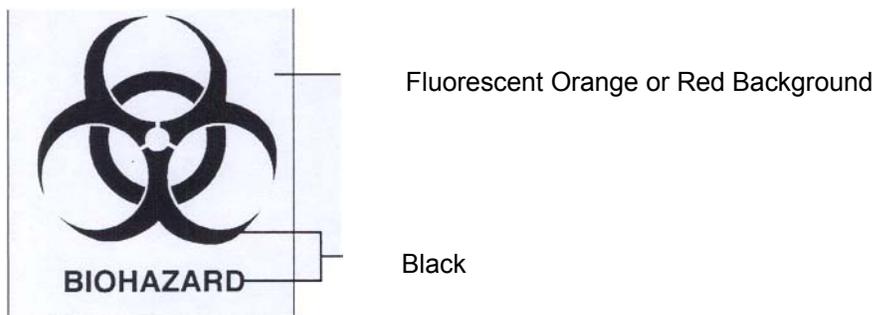
(6) In each sharps mailing kit, the manufacturer or distributor must include a step-by-step instruction sheet that clearly details the proper sequence and methods of kit assembly prior to mailing to prevent package failure during transport due to improper assembly.

c. *Package documentation, marking, and labeling.*

(1) Each primary receptacle and outer packaging must bear a label, which cannot be detached intact, showing: (a) company name of the manufacturer or the distributor; (b) U.S. Postal Service Authorization Number; and (c) container ID number (or unique model number) signifying that the packaging material is certified and the manufacturer or distributor obtained an authorization required by 8.5a.

(2) The outer packaging must bear the international biohazard symbol in black with either a fluorescent orange or fluorescent red background as shown in Exhibit 8.5c(2).

**Exhibit 8.5c(2) International Biohazard Symbol**



(3) All mail pieces containing used sharps must be accompanied by a four-part manifest or mail disposal service shipping record. The manifest must be placed in an envelope affixed to the outside of the mailpiece. The manifest must comply with all applicable requirements imposed by the laws of the State from which the package is mailed. At a minimum, the information shown in Exhibit 8.5c(3) must be on the manifest.

(4) The outer packaging must bear a properly prepared merchandise return service label (see 8.923).

(5) Mailable material must be marked as specified in 8.7.

d. *Package testing.* Testing must be performed on one sample of each type of kit to prove compliance with 8.5a. The sample packaging kit must withstand the tests in 49 CFR 178.604 (leakproof test), 178.606 (stacking test), 178.608 (vibration standard), and 178.609 (test requirements for packaging for infectious substances/etiologic agents). In addition, the outer packaging must be subjected to the bursting test in 49 CFR 178.609(h)(2) and an absorbency test for the absorbent material commensurate with the requirements in 8.5b(4) must be performed. The test results must show that if every packaging kit prepared for mailing were to be subject to the environmental and test conditions in 49 CFR, there would be no release of the contents to the environment and no significant reduction in the effectiveness of the packaging. Periodic retesting must be performed whenever a change is made to the packaging design or every 24 months, whichever occurs first.

### Exhibit 8.5c(3) Manifest for Sharps Containers

**1. Generator (Mailer)**

- a. Name.
- b. Complete address (not a post office box).
- c. Telephone number.
- d. Description of contents of shipping container. "Used Medical Sharps" is required.
- e. Date shipping container was mailed.
- f. State permit number of approved facility in which contents are to be disposed.

**2. Destination Facility (Disposal Site)**

Complete address (not a post office box).

**3. Generator's (Mailer's) Certification**

"I certify that this carton has been approved for the mailing of used medical sharps, has been prepared for mailing in accordance with the directions for that purpose, and does not contain excess liquid or nonmailable material in violation of the applicable postal regulations. I AM AWARE THAT FULL RESPONSIBILITY RESTS WITH THE GENERATOR (MAILER) FOR ANY VIOLATION OF 18 USC 1716 WHICH MAY RESULT FROM PLACING IMPROPERLY PACKAGED ITEMS IN THE MAIL. I also certify that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and in proper condition for carriage by air according to the applicable national governmental regulations."

This printed statement is to be followed by printed name of generator (mailer), signature of generator, and date when manifest was signed.

**4. Destination Facility (Storage or Disposal Site)**

- a. Printed certification of receipt, treatment, and disposal stating: "I certify that the contents of this package have been received, treated, and disposed of in accordance with all local, state, and federal regulations."
- b. Printed or typewritten name of an authorized recipient at destination facility.
- c. Signature of authorized recipient at destination facility.
- d. Date representative of destination facility signed manifest.

**5. Transporter or Intermediate Handler Other Than U.S. Postal Service (If Different From Destination Facility)**

- a. Name.
- b. Complete street address (not a post office box).
- c. Printed name of transporter or intermediate handler.
- d. Signature of transporter or intermediate handler.

**6. Serialized Manifests**

Manifest or mail disposal service shipping forms must be serialized.

**7. Area Reserved for Comments**

Manifest must contain an area designated for entering discrepancies and comments, especially if an alternative destination facility is used.

**8. Completion and Distribution of Manifest**

Manifest must contain instructions for properly completing manifest and distributing copies.

- a. One copy must be kept by generator (mailer).
- b. One copy must be kept by transporter or intermediate handler for 90 days.
- c. One copy must be kept by destination facility for 90 days.
- d. One copy must be mailed to generator by destination facility.

**9. Emergency Telephone Number**

Manifest must bear following statement with appropriate information:

"IN CASE OF EMERGENCY, OR THE DISCOVERY OF DAMAGE OR LEAKAGE, CALL 1-800-XXX-XXXX."

## 8.6 Other Used Medical Devices

USPS authorization is not required to mail other used medical devices and waste as defined in 8.2e. Packaging for other used medical devices is subject to these standards:

- a. Other used medical devices must be mailed as First-Class Mail, Priority Mail, or Express Mail.

- b. Other used medical devices must be packaged in a securely sealed, leak-resistant primary receptacle, the total liquid volume of which must not exceed 50 ml unless the devices are shipped in formalin or its equivalent. The primary receptacle must maintain its integrity when exposed to temperatures between 0° and 120°F.
- c. The primary receptacle must be enclosed in an outer packaging constructed of 200-pound grade corrugated fiberboard or similar material of equivalent strength. The primary receptacle must fit securely within the outer packaging to prevent breakage during ordinary processing.
- d. There must be enough absorbent material and secondary leakproof material between the primary receptacle and the outer packaging to absorb three times the total liquid allowed. If the device is mailed in a formalin solution or its equivalent, there must be enough absorbent material and secondary leakproof material to absorb the entire liquid contents in case of leakage.
- e. Each parcel containing other used medical devices must bear a complete street return address (not a post office box) and cannot exceed 35 pounds.
- f. Mailable material must be marked as specified in 8.7.

### **8.7 Marking and Labeling of Division 6.2 Material**

All mailable division 6.2 materials, except those prepared under 8.4, must be sent via air transportation. The following markings and labels are required, as applicable:

- a. *Infectious Substances (Etiologic Agents)*. Materials mailable under 8.3 must be marked and labeled as specified in 8.3f. A shipper's declaration for dangerous goods is required.
- b. *Clinical Specimens and Biological Products*. Materials mailable under 8.4 must be marked on the address side with "Clinical Specimen-Blood . Sample," "Clinical Specimen-Urine Sample," "Clinical Specimen-Saliva Sample," "Biological Product," etc., as appropriate. The universal biohazard symbol shown in Exhibit 8.5c(2) may appear on the address side. A shipping paper is not required for material sent under 8.4.
- c. *Sharps Wastes*. Parcels containing sharps waste mailable under 8.5 must be marked on the address side with the proper shipping name and correct UN number (e.g., "Regulated Medical Waste-Sharps, UN 3291"). The universal biohazard symbol shown in Exhibit 8.5c(2) must appear on the outside of the mailpiece. The manifest required in 8.5c serves as the shipping paper.
- d. *Other Used Medical Devices*. Parcels containing other used medical devices mailable under 8.6 must be marked on the address side with the proper shipping name and correct UN number (e.g., "Regulated Medical Waste, UN 3291"). The universal biohazard symbol shown in Exhibit 8.5c(2) must appear on the outside of the mailpiece. A shipping paper is required.

### **9.0 RADIOACTIVE MATERIALS (HAZARD CLASS 7)**

Radioactive materials are prohibited in international mail and domestic mail if required to bear the DOT Radioactive White-I, Radioactive Yellow-II, or Radioactive Yellow-III label (49 CFR 172.436, 172.438, or 172.440, respectively) or if it contains quantities of radioactive material in excess of those authorized in Publication 52, *Acceptance of Hazardous, Restricted, or Perishable Matte/*: Radioactive materials are prohibited in domestic mail via air transportation. For international mail, the standards in IMM 135 apply.

## **10.0 CORROSIVES (HAZARD CLASS 8)**

### **10.1 Definition**

A *corrosive* is any liquid or solid that causes visible destruction or irreversible alteration in human skin tissue at the site of contact or a liquid that has a severe corrosion rate on steel.

### **10.2 Mailability**

Corrosives are prohibited in international mail. A corrosive that can qualify as an ORM-D material is permitted in domestic mail via air or surface transportation subject to these limitations:

a. *Liquid Corrosive*. A liquid mixture must be 1 pint or less and must contain 15% or less corrosive material with the remainder of the mixture not being a hazardous material, unless otherwise specified for a specific corrosive material. Primary receptacles must be securely sealed compatible glass bottles that are enclosed within securely sealed metal or plastic secondary packagings. The secondary packaging must be packed within a strong outer packaging that does not exceed 25 pounds per mail piece.

b. *Solid Corrosive*. A solid mixture must be 10 pounds or less per primary receptacle and must contain 10% or less corrosive material with the remainder of the mixture not being a hazardous material, unless otherwise specified for a specific corrosive solid. The primary receptacle(s) and secondary packaging must be securely sealed compatible siftproof containers packed in strong outer packaging. The total weight of aailable solid corrosive cannot exceed 25 pounds per mail piece.

### **10.3 Marking**

For surface transportation, the mailpiece must be plainly and durably marked on the address side with "Surface Mail Only" and "ORM-D" immediately following or below the proper shipping name. For air transportation, the mailpiece must be plainly and durably marked on the address side with "ORM-D AIR" immediately following or below the proper shipping name and must bear a shipper's declaration for dangerous goods.

## **10.4 Nonspillable Wet Electric Storage Batteries**

A battery containing liquid electrolyte is prohibited from mailing unless the battery casing is completely sealed to prevent the liquid corrosive from spilling during handling. Nonspillable batteries with UN2800 are prohibited in international mail, but may be sent as domestic mail via air or surface transportation under the following conditions:

a. The nonspillable battery must be protected from short circuits and securely packaged in a strong fiberboard box.

b. The outer packaging must be marked "NONSPILLABLE BATTERY, UN2800" on the address side.

c. The nonspillable battery must be capable of withstanding the vibration and pressure differential tests cited in 49 CFR 173.159(d)(i) and (ii).

d. Only one nonspillable battery is allowed per mailpiece and the weight of the mailpiece cannot exceed 50 pounds.

## **11.0 MISCELLANEOUS HAZARDOUS MATERIALS (HAZARD CLASS 9)**

### **11.1 Definition**

A *miscellaneous hazardous material* is a substance or article that presents a hazard during transportation but does not meet the definition of any other hazard class. Examples of miscellaneous hazardous materials (not all of which

are mailable) include solid dry ice, magnetized materials, elevated temperature substances, environmentally hazardous substances, life-saving appliances, and asbestos.

## 11.2 Mailability

A miscellaneous hazardous material is prohibited in international mail. A miscellaneous hazardous material that can qualify as an ORM-D material is permitted for domestic mail via air or surface transportation, subject to the applicable 49 CFR requirements.

## 11.3 Marking

For surface transportation, the mailpiece must be plainly and durably marked on the address side with "Surface Mail Only" and "ORM-D" immediately following or below the proper shipping name. For air transportation, a mailable material must be plainly and durably marked on the address side with "ORM-D AIR" immediately following or below the proper shipping name and bear a shipper's declaration for dangerous goods.

## 11.4 Dry Ice

Dry ice (carbon dioxide solid) is prohibited in international mail. Dry ice is permitted in the domestic mail via air or surface transportation when used as a refrigerant to cool the contents of a mail piece. A mailpiece containing dry ice must be packed in a container that is designed to permit the release of carbon dioxide gas and prevent a build-up of pressure that could rupture the parcel. Containers must conform to 49 CFR 173.217 and 175.10(a)(13). Additionally, the following applies:

a. *Air Transportation.* Each mail piece may not contain more than 5 pounds of dry ice. The address side of each mailpiece must be clearly marked "Carbon Dioxide Solid, UN1845" or "Dry Ice, UN1845" along with the net weight of the dry ice and the identity of the contents being cooled. A shipper's declaration prepared in triplicate and a DOT Class 9 warning label for miscellaneous hazardous materials must be affixed to the outside of the mailpiece.

b. *Surface Transportation.* The amount of dry ice per mailpiece may exceed 5 pounds. The address side of each mailpiece must be clearly marked "Carbon Dioxide Solid" or "Dry Ice" and "Surface Mail Only" along with the net weight of the dry ice and the identity of the contents being cooled. A shipper's declaration and a DOT Class 9 warning label is not required for the dry ice.

## 11.5 Magnetized Materials

A magnetized material is a hazard class 9 material subject to these limitations:

a. *Definition.* A magnetized material is an article that has a magnetic field strength capable of causing the deviation of aircraft instruments. Magnetized materials include magnets and magnetized devices such as magnetrons and light meters of sufficient strength to possibly cause erroneous aircraft compass readings.

b. *Mailability.* Magnetized material is prohibited in international mail except as permitted in IMM 136. A material with a measurable magnetic field strength greater than 0.00525 gauss at 15 feet is prohibited in the domestic mail. For domestic mail via air transportation, a magnetized material capable of causing a compass deviation at a distance of 7 feet or more is prohibited. Mailable materials must be packaged and marked as specified in Publication 52. Mailable material permitted via air transportation must bear a shipper's declaration for dangerous goods.