EPA's Pesticide Container-Containment Regulations: A Primer

The Pesticide Stewardship Alliance

February 23, 2009

Pesticide Container-Containment Track

- EPA's Perspective (10:15 – 11:45 am)
  - Nancy Fitz, U.S. EPA
- Retailers' Perspective (12:45 – 2:15 pm)
  - Kevin Runkle, IFCA & AASA
  - Clifford Schoettmer, Schoettmer Enterprises
- Registrants' Perspective (3:30 – 5:00 pm)
  - Marty Fitzpatrick, BASF & CLA Stewardship
  - Wendy Bair Johnson, BASF

1. Overview: Purpose of the Rule

- **Containers**
  - Minimize human exposure during container handling
  - Facilitate container disposal & recycling
  - Encourage use of refillable containers

- **Containment**
  - Protect environment from releases at bulk storage sites
  - Protect environment from spills & leaks at refilling & dispensing operations

1. Rule Overview: Who, What, When?

Category	Nonrefillable Containers	Refillable Containers	Repackaging Products	Container Labeling	Containment Structures
Who must comply?	Registrants	Registrants	Registrants Refillers	Registrants Users	Ag retailers Ag comm apps Ag custom bldr
Major Require-ments	- DOT container design, construction & marking standards - Dispensing capability - Standard closures - Residue removal (99.99% removal)	- DOT container design, construction & marking standards - One-way valves or tamper-evident devices - Vent, gauge & shutoff valve standards for large tanks	- Registrants & refillers comply with specified conditions - Registrants develop & provide certain information - Refillers obtain & follow information; and clean, inspect & label containers before refilling them	- Identify container as nonrefillable or refillable *(all)* - Statement to prohibit reuse and offer for recycling; batch code *(all nonrefillables)* - Cleaning instructions *(some nonrefillables)* - Cleaning instructions before disposal *(all refillables)*	- Secondary containment structures (dikes) around large tanks - Containment pads for pesticide dispensing areas - Good operating procedures - Monthly inspections of tanks & structures
Compli-ance Date	Aug 17, 2009	Aug 17, 2011	Aug 17, 2011	Aug 17, 2010	Aug 17, 2009

1. Rule Overview: Who & What?

- **Retailers**
  - Containment
  - Refillable containers
  - Repackaging
- **Registrants**
  - All of the above
  - Nonrefillable containers
  - Labels

Pesticide Containment Requirements

Pesticide Containment

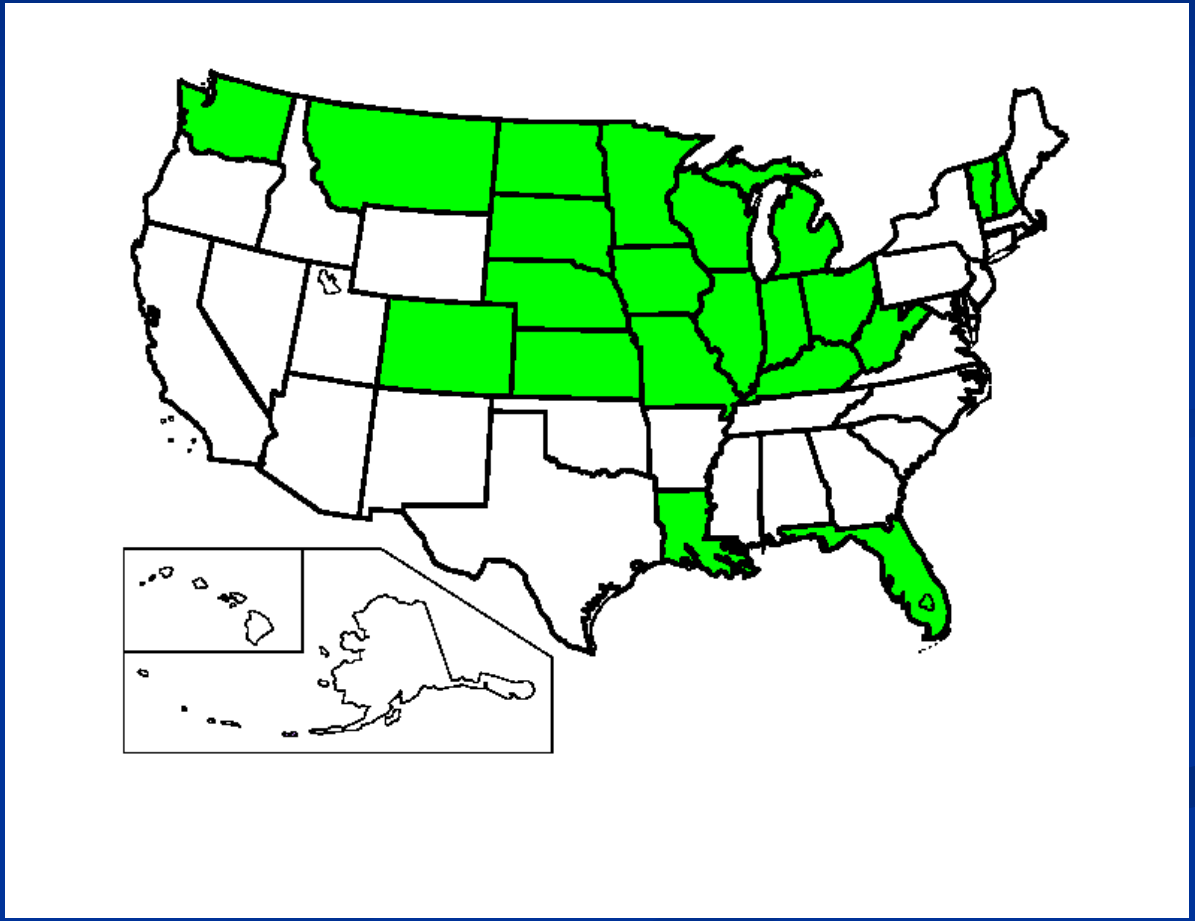
- Do the federal containment regulations apply **to my State or Tribe**?
- **When do facilities have to comply** with the federal containment regulations?
- **Which facilities** must comply with the federal containment regulations?
- **What** do the federal containment regulations **require**?
  - General Design Requirements
  - Specific Design Requirements
  - Operational, maintenance, inspection & recordkeeping

2. Do the federal containment regs apply to my State or Tribe?

- States that had containment regs by August 2006 have the option of continuing to implement state regs **in lieu of federal containment regs** (if EPA determines the state regs provide equivalent environmental protection).
- Everywhere else: Federal containment regulations apply.

2. States with Pesticide Containment Regs

CO
FL
IL
IN
IA
KS
KY
LA
MI
MN
MO
MT
NE
NH
ND
OH
SD
VT
WA
WV
WI



2. States with Pesticide Containment Regs

- 21 States submitted requests to continue to implement their own programs **in lieu of the federal containment requirements**, i.e., for equivalency determinations.
  - July 10, 2007 Implementation Guidance: State cnmt program is adequate to provide environmental protection equivalent to the Federal cnmt regs if State regs achieve the **same protection of human health & the environment from exposure to spills and leaks** which may occur during container refilling or when a stationary container fails.
- OPP makes the determinations of equivalency; working with Regions, OGC, OECA through this process
- OPP will notify state of determination by letter

2. States & Tribes without Containment Regs

Key points:

- Compliance required with federal containment regulations beginning August 17, 2009.
- Region & State/Tribe negotiate expectations for inspections.

Options in draft implementation guidance:

1. Implement federal containment regulations
   - Default option; no State/Tribal regulations
2. Issue State/Tribal regulations that incorporate federal containment regs by reference
3. Issue State/Tribal regulations that are identical to federal containment regs
4. Issue State/Tribal containment regs that are different than federal containment regs
   - Important for State/Tribal regs not to conflict with federal regs (which apply regardless of what State/Tribe does)

3. Compliance Date

§165.80(c)

3. When do facilities have to comply with the federal containment regulations?

- Compliance is required with the federal containment regulations by **August 17, 2009**.
  - Except in States that EPA has authorized to continue to implement state regs in lieu of federal regs
- Bad news: about half of a year to implement
- Good news: Most bulk facilities have containment already
  - American Agronomic Stewardship Alliance (AASA) inspections past 4 years show that most facilities have secondary containment and pads

4. Scope of the Containment Regulations

§165.81 and §165.82

4. Containment - Scope

Need to consider three things to determine whether a facility must comply with the containment regulations:

1. Is the facility included?
2. Does the facility need secondary containment?
3. Does the facility need a containment pad?

4. Scope: Facilities Included

1. Is the facility included?

A facility is included in the scope for containment if:

- It handles **agricultural pesticides**; and
- **It is a retailer that refills, commercial applicator, and/or custom blender.**

- Farms are not included in the scope: based on evidence of contamination

4. Scope: Facilities Included

How do the regs describe these types of facilities?

- **Retailers that refill**: Refilling establishments who repackage agricultural pesticides and whose principal business is retail sale (i.e., more than 50% of total annual revenue comes from retail operations)
- **Commercial applicators**: Businesses which apply an agricultural pesticide for compensation (other than trading of personal services between agricultural producers)
- **Custom blenders** (as defined in §167.3): Any establishment which provides the service of mixing pesticides to a customer's specifications, usually a pesticide(s)-fertilizer(s), pesticide-pesticide, or a pesticide-animal feed mixture, when…

4. Scope: Secondary Containment

2. Does the facility need secondary containment?

If the facility is included in the scope (see question #1), it must have a secondary containment structure if it has at least one container that:

- Is a **stationary pesticide container** (fixed at a facility or remains at facility for at least 30 days) and
- Has a capacity that is equal to or greater than **500 gallons** for liquid pesticides or **4,000 pounds** for dry pesticides.

4. Scope: Containment Pads

3. Does the facility need a containment pad?

If the facility is included in the scope (see question #1), it must have a containment pad if any of these occur:

- **Refillable containers** are emptied or **cleaned**;
- Pesticides are **dispensed from a stationary container** ≥ 500 gal or 4,000 lbs for any purpose
- Pesticides are **transferred from a transport vehicle** to fill a refillable container
- Pesticides are dispensed from any other container to **fill a refillable container for sale or distribution**.

4. Scope: Exemptions

Stationary containers ≥500 gals/4,000 lbs are exempt from secondary containment requirements if they:

- Are empty.
- Only hold rinsates or washwater (& labeled so).
- Only hold gaseous pesticides.
- Are for non-pesticide use only (& labeled so).

Dispensing areas are exempt from containment pad requirements if they:

- Only have gaseous pesticides.
- Only have stationary containers already protected by a secondary containment unit.
- Are used for dispensing from a rail car (in place less than 30 days).

4. Is secondary containment required?

Assume that all of these facilities handle agricultural pesticides.

- **Scenario 1:** A 1,000-gallon truck holding an agricultural pesticide is at a facility for 2 weeks. The facility dispenses pesticide from the truck for commercial application.
- **Scenario 2:** Same as scenario 1, except the truck is at the facility for 2 months.
- **Scenario 3:** A commercial applicator facility has ten 200-gallon minibulk containers.
- **Scenario 4:** A retail facility (that repackages) has two 450-gallon tanks that are bolted to concrete.
- **Scenario 5:** A retail facility (that repackages) has several 5,000-gallon tanks that are clearly stationary storage tanks.

4. Is a containment pad required?

A retailer repackages agricultural pesticides from a 1,000-gallon stationary tank. Is a containment pad required when:

- **Scenario 7:** The retailer transfers from that tank to refill minibulk containers?
- **Scenario 8:** The minibulks are rinsed before they are refilled?
- **Scenario 9:** The retailer transfers pesticides from the 1,000-gal tank into a container on a truck (nurse tank), which will be taken to farms to refill minibulk containers?
- **Scenario 10:** The retailer goes to a farm and refills a minibulk container at the farm?

4. Is containment required?

This same retailer (who has a 1,000-gallon stationary tank with an agricultural pesticide) is also a commercial applicator.

- **Scenario 11:** The retailer uses 2.5-gallon jugs to fill application equipment for a commercial application. Is a pad required?
- **Scenario 12:** Does he have to rinse the jugs on a pad?

This same retailer also has a repackaging agreement with a registrant to repackage a different agricultural pesticide into 15-gallon refillable containers for sale and he stores that pesticide in a 300-gallon minibulk.

- **Scenario 13:** Does this repackaging have to happen on a pad?
- **Scenario 14:** Does the 300-gallon minibulk container have to be in secondary containment?

5. What do federal containment regs require?

- Regulations: 40 CFR Part 165, Subpart E – Standards for Pesticide Containment Structures
- Reg text: pages 25-31
  - Regs from '06 final rule; in Code of Fed. Regs (CFR)
  - Also shows final amendments (Oct '08): corrections, clarifications, minor fixes

5. What do federal containment regs require?

- General design requirements for pads & secondary containment
  - Construction materials, liquid-tight, compatible
  - Protect appurtenances, pipes/drains, stormwater
- Specific requirements for pads & secondary containment
  - Minimum capacity requirements
  - Anchor or elevate stationary tanks
  - Pad specifications
- Operational, maintenance, inspection & recordkeeping requirements

6. General Design Requirements for Secondary Containment Units and Pads

§165.85(a) & (b): New structures

§165.87(a) & (b): Existing structures

6. General Design: Structural Integrity

6-1. Structural Integrity. Do the containment structures in the following three photos meet the structural integrity requirement (first sentence) of §165.85(a)(1) and §165.87(a)(1)?

6. Structural Integrity – Photo 1

6. Structural Integrity – Photo 2

6. Structural Integrity – Photo 3

6. General Design: Liquid-Tight

6-2. Liquid-tight. Do the containment structures in photo 3 and the following three photos meet the liquid-tight requirement (second sentence) of §165.85(a)(1) and §165.87(a)(1)?

6. Liquid-Tight – Photo 4

6. Liquid-Tight – Photo 5

6. Liquid-Tight – Photo 6

6. General Design: Appurtenance Protection

6-3. Appurtenance protection. Do the containment structures in the following two photos meet the appurtenance protection requirement in §165.85(b)(1) and §165.87(b)(1)?

6. Appurtenance Protection – Photo 7

6. Appurtenance Protection – Photo 8

6. General Design: Stormwater Protection

6-4. Stormwater protection. Do the containment structures in the following two photos meet the stormwater protection requirement in §165.85(b)(3) and §165.87(b)(3)?

6. Stormwater Protection – Photo 9

6. Stormwater Protection – Photo 10

7. Specific Design Requirements for Secondary Containment Units and Pads

§165.85(c), (d), (e) & (f): New structures

§165.87(c), (d), (e) & (f): Existing structures

7. Basic Area and Volume Calculation Formulas

- Surface Area of a rectangle (square feet) = length x width
- Volume (cubic feet) = surface area x height
- Volume (gallons) = Volume in cubic feet x 7.48
- Volume (in gallons) per foot in a cylinder = D^2 x 5.874, where D = diameter of tank (feet)
- Volume of a cone (gallons) = 1.047 x (R^2xHC) x 7.48, where R = radius of tank (feet) and HC = height of cone (feet)
- Displacement = volume of storage containers + appurtenances within a containment from the top of the containment wall to the floor
- Net containment = total volume of containment – displacement
- % contained = Net containment / largest container x 100

7-1 What is the volume requirement for a secondary containment facility that is inside or covered? [§165.85(c)(1) and (§165.87(c)(1)]

A. 100% capacity of the largest container
B. 100% capacity of the largest container plus displacement of other tanks and appurtenances
C. No secondary containment required for pesticides stored inside a building or warehouse
D. 125% capacity of the largest container

7-2 What is the volume requirement for a containment pad or dispensing area that is inside or covered? [§165.85(c)(3&4) and (§165.87(c)(2&3)]

A. 100% capacity of the largest container
B. 135% capacity of the largest container
C. No containment pad required for operational area stored inside a building or warehouse
D. 750 gallons or 100% capacity of the largest container if less than 750 gallons

7-3 The pad in this picture is 18 feet wide by 18 feet long and 3 inches high. What is the volume of the pad? [§165.85(c)(3&4)]

A. 81 gallons

B. 972 cubic feet

C. 606 gallons

7-4 Would this pad be subject to the federal pesticide containment regulations? [§165.80 & §165.82]

Answers to Questions 7-3 & 7-4

Answer to 7-3: C - 606 gallons

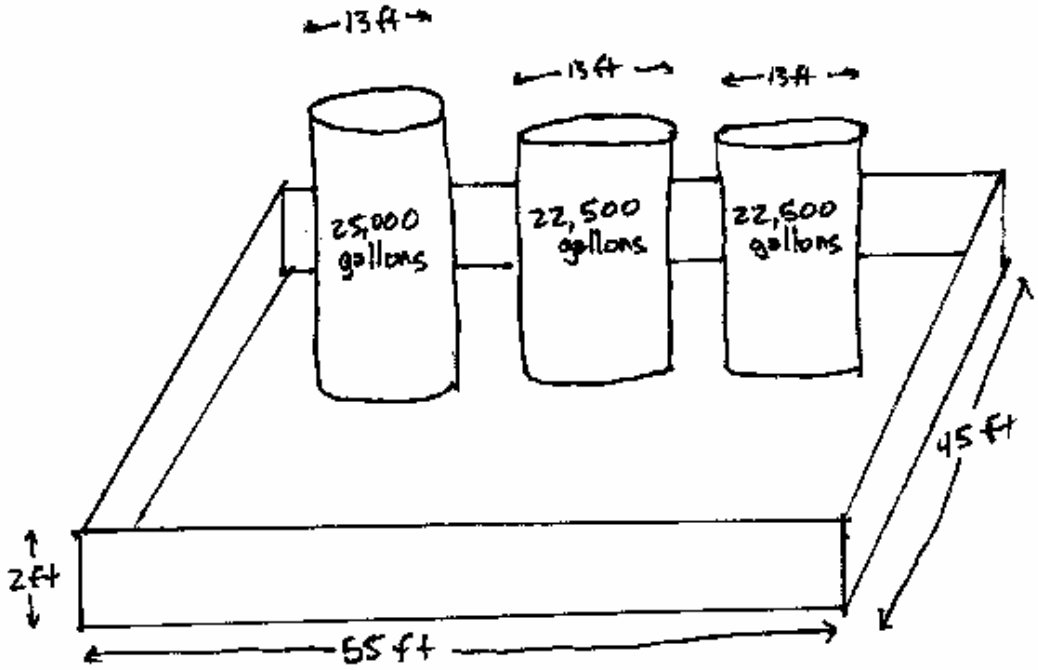
- Volume = length x width x height
- Volume = 18 ft x 18 ft x 0.25 ft = 81 cu. ft.
- Volume (gal) = Volume (cubic feet) x 7.48
- Volume (gal) = 81 cu. ft. x 7.48 = 606 gal

Answer to 7-4: No, this pad is in the field so it is not at any of the types of facilities that are subject to the containment regs in §165.80(b).

7-5 An existing secondary containment has an interior measurement of 55 feet long, 45 feet wide, and 2 feet high. The containment is constructed of concrete. The facility has 5 storage containers, one at 25,000 gallons, two at 22,500 gallons and two at 15,000 gallons. The 25,000 and the 22,500 gallon containers are flat bottom tanks. The two 15,000 gallon containers are cone bottom tanks. The diameter of the 25,000 and 22,500 gallon containers is 13 feet. The cones of the 15,000 gallon containers do not extend below the top of the wall of the secondary containment. [§165.85(c)(1&2)]

A. What is the gross volume of the secondary containment?
B. What is the displacement of the secondary containment?
C. What is the % contained in the secondary containment?

Question 7-5


13 ft
13 ft
13 ft
25,000 gallons
22,500 gallons
22,500 gallons
45 ft
2 ft
55 ft

Answer to Question 7-5 (A)

- A. What is the gross volume of the secondary containment?
- Answer: 37,026 gallons

- Volume = length x width x height
- Volume = 55 ft x 45 ft x 2 ft = 4,950 cu. ft.

- Volume (gal) = Volume (cubic feet) x 7.48
- Volume (gal) = 4,950 cu. ft. x 7.48 = 37,026 gal

Answer to Question 7-5 (B)

- B. What is the displacement of the secondary containment?
- Answer: 3,970 gallons

- Regs specify that the capacity is 100% (or 110%) of the volume of the largest container plus the volume displaced by **other** containers & appurtenances.
  - Largest container is not counted in displacement
  - Cone-bottom tanks are above wall; also not counted in displacement
  - Displacement = volume of the two 22,500-gallon tanks below wall height

- **Volume of cylinder = D^2 x 5.874 x height**
- Volume of cylinder = 13 ft x 13 ft x 5.874 x 2 ft
- Volume of cylinder = 1,985 gallons (for one tank)

- Volume displaced = 1,985 gallons x 2 tanks = 3,970 gallons

Answer to Question 7-5 (C)

- C. What is the percent contained in the secondary containment?
- Answer: 132%

- Net containment = total volume – displacement
- Net containment = 37,026 gal – 3,970 gal = 33,056 gal

- % contained = Net containment/largest container x 100
- % contained = 33,056 gal/25,000 gal x 100% = 132%

7-6 To prevent flotation of storage containers within a secondary containment the storage containers must be: [§165.85(d)]

A. Anchored
B. Always contain product
C. Elevated
D. Elevated or anchored

7-7 Stationary dry pesticide containers must be: [§165.85(f)]

A. Protected from wind and precipitation
B. Stored on a pallet or somehow elevated
C. Enclosed by at least a 6-inch curb that extends at least 2 feet beyond the perimeter of the container
D. All of the above
E. None of the above

7-8 What is the minimum surface area required for containment of transport vehicles on the operational pads? [§165.85(e)]

A. The front and rear wheels of the transport vehicle
B. The entire tank on the vehicle
C. At least the portion of the vehicle where the hose or device couples to it
D. At least one valve on the tank

8. Operational, Inspection, Maintenance & Recordkeeping Requirements

§165.90 and §165.95

8. Operational Requirements

8-1. To manage the small spill on the pad in the photo, the facility must [§165.90(a)]:

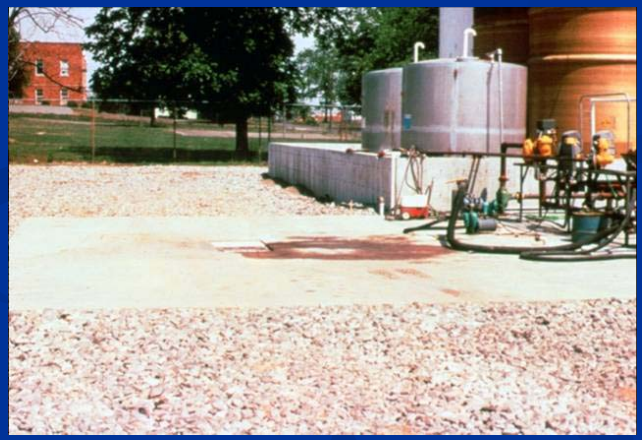
A. Manage the pad to prevent pesticides from escaping

B. Collect & recover the spill in a way that is protective and allows maximum practicable recovery

C. Clean it up by the end of the day

D. Manage the cleaned up material according to label instructions and all applicable laws & regulations

E. All of the above



8. Inspection Requirements

8-2 If pesticides are being stored or dispensed on a containment structure, a facility must inspect containers, appurtenances and the containment structures: [§165.90(b)(1)]

A. **Routinely**
B. **Monthly**
C. **Quarterly**
D. **None of the above**

8. Maintenance Requirements

During an inspection, an employee finds a crack in a pad. The employee notes the crack in the inspection records, tells the manager about the crack, and brushes the dirt and dust from the crack to clean it out. Three days later, the employee seals the crack with material recommended by the registrants of the pesticides dispensed on the pad and records this in the maintenance records. [§165.90(b)(2) and §165.95(a)]

8-3 Does this response to the crack comply with the containment regs?

Pesticide Container Requirements

Part 165 Subpart B: Nonrefillable containers

Part 165 Subpart C: Refillable Containers

Part 165 Subpart D: Repackaging

Part 156 Subpart H: Container Labeling

9. Which Products Must Comply?

- The **nonrefillable container, refillable container and repackaging requirements** apply to all pesticide products except for:
  - Manufacturing use products (MUPs);
  - Plant-incorporated protectants (PIPs); and
  - Antimicrobial products that are exempt.

- The **label requirements** apply to all pesticide products except for:
  - Plant-incorporated protectants.

Key Requirements

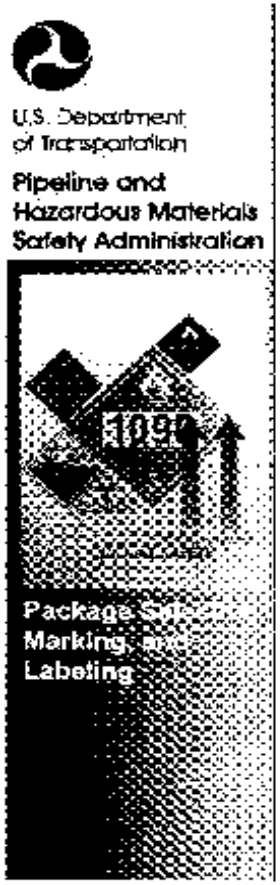
- **Refillable containers (August 2011)**
  - DOT packing group III standards
  - Marking
  - Tamper-evident device/one-way valve
  - Requirements for stationary tanks
- **Repackaging (August 2011)**
  - Registrants: authorize refillers & develop certain information
  - Refillers: Obtain & follow registrant info; inspect, clean & label refillable containers
  - Compare repackaging requirements to Bulk Pesticides Enforcement Policy

10. Refillable Containers

10. DOT/United Nations Marking

- Example:
- un 1A1/Y 1.4/200/06/USA883466
- Important: look for X, Y or Z
  - X = meets PG I stds (most stringent)
  - Y = meets PG II stds
  - Z = meets PG III stds
- In DOT regs, marking with UN symbol:
  - Can only be used if package fully conforms with requirements - 49 CFR 178.3(b)
  - Certifies that all requirements are met – 49 CFR 178.2(b)

10. DOT/United Nations Marking



Identification Code for UN Standard Packaging

SINGLE PACKAGING

Z – PGIII
(minor danger)

Y – PGII
(medium danger)

X – PGI
(great danger)

(un) 1A1/Z1.4/150/05
USA/0000

§178.502; §178.503

10. Marking

10-1. a) Does §165.45(d) require this bulk tank to have a serial number or other identifying code marked on it?

b) If so, would this bulk tank comply with §165.45(d)?

10. Tamper-Evident Device/One-Way Valve

10-2. These photos show several openings on minibulk containers.

a) Do these comply with §165.45(e)?

b) What is the definition of tamper-evident device? (See §165.3.)

10. Tamper-Evident Device/One-Way Valve

10-3. The valve at the bottom of this minibulk is not a one-way valve.

a) Does this minibulk comply with the requirement in §165.45(e)?

b) What is the definition of a one-way valve? (See §165.3.)

10. Tamper-Evident Device/One-Way Valve

10-4. The end user has to break the tamper-evident device to remove pesticide from the minibulk through this valve. **When the minibulk is returned, would the refiller have to clean the minibulk before refilling it with the same pesticide product?** (See §165.70(g) & (h).) **Why or why not?**

10. Stationary Tanks

10-5. These photos show stationary tanks that comply with two of the standards in §165.45(f)(2).

a) What are the criteria for vents on liquid tanks?

b) What are the criteria for acceptable valves on liquid tanks?

11. Repackaging

11. Repackaging: Requirements

- Applies to registrants and refillers (registrants, distributors, retailers)
- Registrants
  - Authorize refillers to repackage their product (written contract)
  - Develop and provide certain information
- Refillers
  - Obtain and follow registrant info
  - Inspect, clean and label containers
- Recordkeeping for registrants and refillers

11. Repackaging

- The conditions for a registrant to allow an independent refiller to repackage its product are set out in §165.67(b) for registrants and in §165.70(b) for independent refillers. These conditions are intended to assure that the purposes of registration would be satisfied, as in the 1977 Bulk Policy. In addition, other requirements in the repackaging regulations revise or change criteria in the Bulk Policy. **The Bulk Policy will be rescinded when the repackaging regulations go into effect in August 2011.**
- The purpose of this section is to understand the similarities and differences between the repackaging standards in the regulations and in the Bulk Policy (i.e., how repackaging is currently being done.)

11. Regs vs. Bulk Policy

11-1. For each of the conditions for allowing repackaging by an independent refiller (see and §165.70(b)), assess whether the condition is the same as, similar to or different than the Bulk Policy.

1) The repackaging results in no change to the pesticide formulation.
2) The pesticide product is repackaged at a refilling establishment registered with EPA as required by § 167.20 of this chapter OR the product is repackaged by a registered refilling establishment at the site of a user who intends to use or apply the product.
3) The registrant and independent refiller have entered into a written contract to repackage the pesticide product and to use the product's label.
4) The pesticide product is repackaged only into refillable containers that meet the refillable container standards.
5) The pesticide product is labeled with the product's label with no changes except the addition of an appropriate net contents statement and the refiller's EPA establishment number.

11. Regs vs. Bulk Policy (cont.)

11-2. The repackaging regulations include a number of other requirements, which are listed below. (This follows the same order as §165.70(e)). Again, assess whether these requirements are the same as, similar to or different than conditions in the Bulk Policy, requirements in existing regulations and/or current refilling practices.

6) The refiller's establishment must be registered with EPA as a producing establishment as required by § 167.20 of this chapter.

7) The refiller must not change the pesticide formulation unless the refiller has a registration for the new formulation.

8) The refiller must repackage a pesticide product only into a refillable container that is identified on the registrant's description of acceptable containers for that pesticide product.

9) The refiller may repackage any quantity of a pesticide product into a refillable container up to the rated capacity of the container.

10) There are no size limits for the refillable containers.

11. Regs vs. Bulk Policy (cont.)

11) The refiller must have all of the following items at its establishment before repackaging a pesticide product into any refillable container for distribution or sale:
   - The written contract from the pesticide product's registrant.
   - The pesticide product's label and labeling.
   - The registrant's written refilling residue removal procedure for the pesticide product.
   - The registrant's written description of acceptable containers for the pesticide product.

12) Before repackaging, the refiller must identify the pesticide product previously contained in the refillable container to determine whether the container must be cleaned. The previous pesticide product can be identified by referring to the label or labeling.

13) Before repackaging, the refiller must inspect each refillable container.

14) Before repackaging, the refiller must clean each refillable container, if required.

11. Regs vs. Bulk Policy (cont.)

15) The refiller must ensure that each refillable container is properly labeled.
16) The refiller must maintain records of the contract, refilling residue removal procedure and description of acceptable containers.
17) The refiller must maintain the records of the EPA registration number of the product, the container serial number/identifying code and the date of repackaging for each time a pesticide product is repackaged.
18) The refiller must maintain records as required by part 169 and report as required by part 167.
19) The stationary pesticide containers at the refiller's establishment must meet the standards for large stationary containers in §165.45(f).
20) If the independent refiller is a retailer, the refiller must comply with the containment regulations.

Nonrefillable Containers & Labels

Part 165 Subpart B: Nonrefillable containers

Part 156 Subpart H: Container Labeling

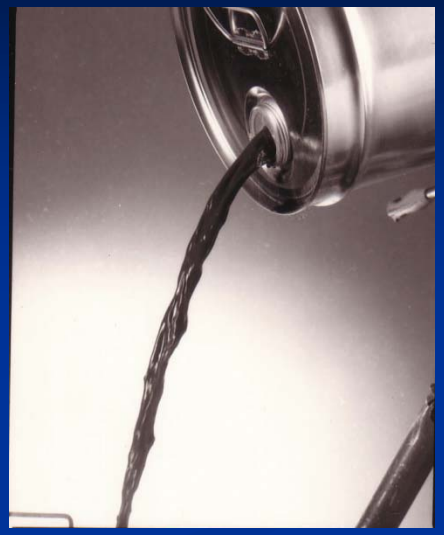
Key Requirements

- **Nonrefillable containers (August 2009)**
  - Scope: Tox Category I or II or restricted use vs. others
  - DOT packing group III packaging
  - Standard closures
  - Dispensing capability
  - Residue removal standard
- **Labels (August 2011)**
  - Nonrefillable container "type" statements
  - Refillable container "type" statements
  - Cleaning instructions

12. Nonrefillable Containers

Nonrefillable Containers: Requirements

- **Requirements for products in Tox Categories 1 & 2 and RUPs**
  - DOT container design, construction & marking stds
    - Basic integrity, testing & others at packing group III level
  - Standard closures (ag pesticides only)
  - Dispensing capability (liquid/5 gal or smaller)
  - Residue removal standard (dilutable/rigid, 5 gal or smaller)
  - Recordkeeping
- **Requirements for products in Tox Categories 3 & 4 (not RUPs)**
  - DOT container design, construction & marking stds
    - Basic integrity only



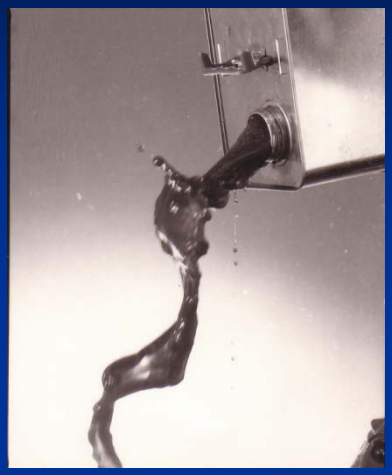
12. Standard Closures

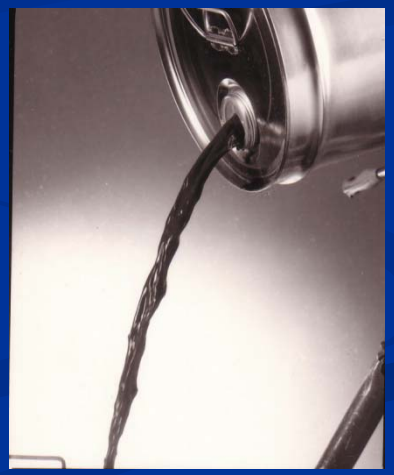
12-1. The containers in the photo are used to sell a Toxicity Category I agricultural pesticide. The drums each have one closure that is a 2-inch bung with buttress threading (5 threads per inch) and one other opening. The 2.5-gal jug in the middle has a 63-mm screw cap (6 threads per inch) and the 1-gal jug on the right has a 38-mm screw cap (6 threads per inch). **Do these containers comply with the standard closure requirement in §165.25(d)? Why or why not?**

12. Dispensing Capability

12-2. These photos were found in the records of two different registrants to show compliance with the "glugging" standard in §165.25(e)(1).

Do both containers meet the standard of pouring in a "continuous, coherent stream?" Why or why not?



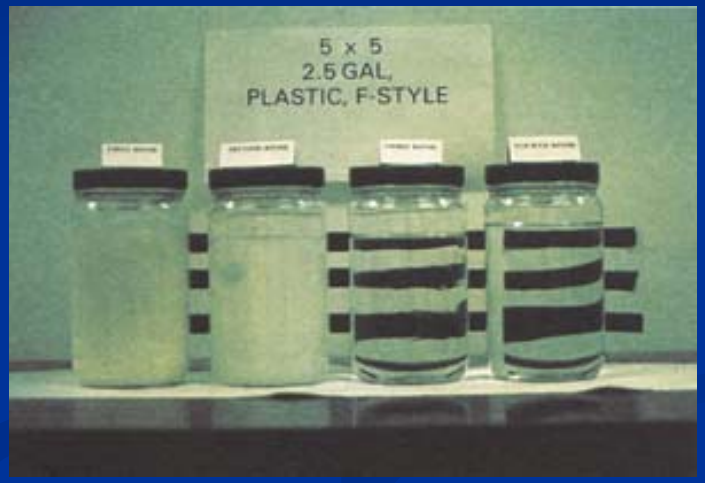


12. Dispensing Capability

12-3. These photos were taken of a container at a commercial applicator's site and clearly show that pesticide dripped down the container. The pesticide product is a restricted use product. **Do these photos show that the registrant is not in compliance with the container design standard in §165.25(e)(2)? Why or why not?**

12. Residue Removal Standard

12-4. The photo shows the rinsate from four rinses of a 2.5-gal plastic jug that held an emulsifiable concentrate that is in Toxicity Category II.



a) To calculate the percent removal, which jar would have to be analyzed to determine the active ingredient concentration?

b) What other active ingredient concentration would you need to know to calculate percent removal?

Pesticide Labels: New Container-Related Statements

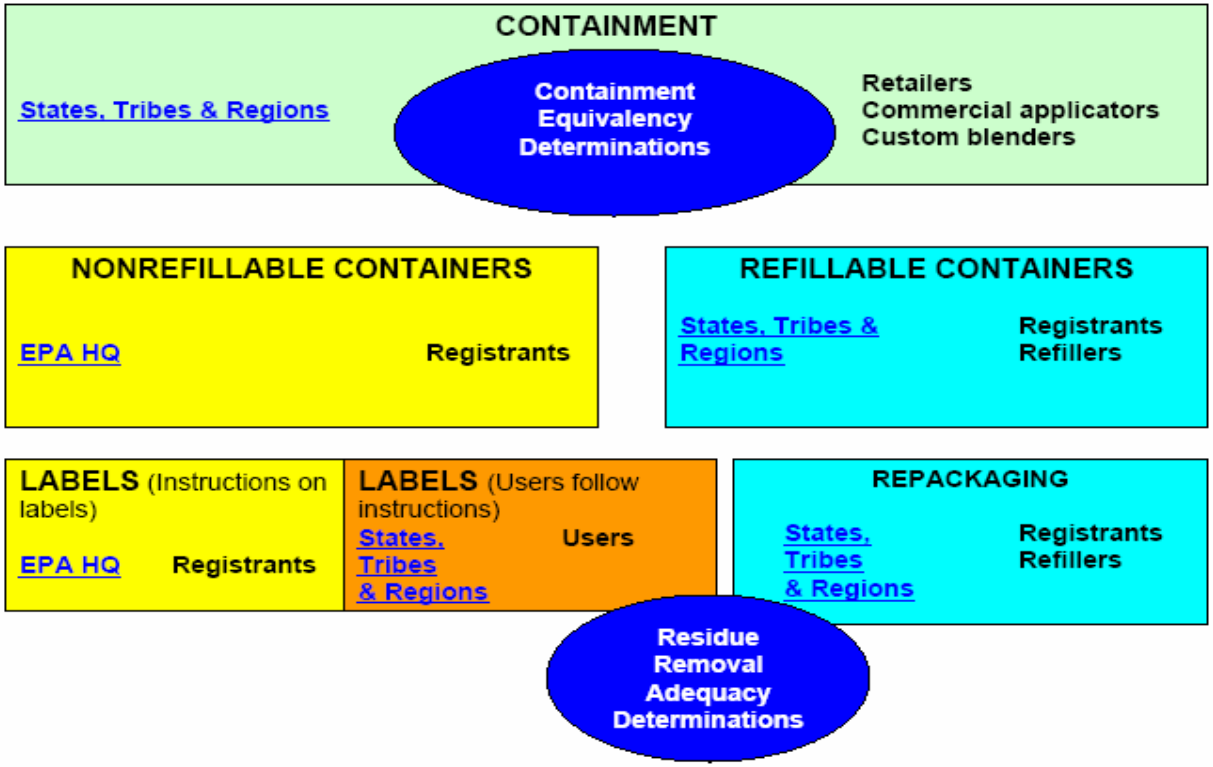
13. Label Changes: Requirements

- **Identify container as nonrefillable or refillable**
- **Re-use & recycling/reconditioning statements + batch code**
  - All nonrefillable containers
- **Cleaning instructions for nonrefillables: triple rinsing and option to include pressure rinsing**
  - Applies to rigid containers with dilutable pesticides
  - Household products exempt
- **Cleaning instructions before final disposal**
  - All refillable containers

13. New Label Instructions for Nonrefillable Containers: Requirements

- Nonrefillable container. **Do not reuse** or refill **this container**. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer or contact [a pesticide container recycling organization] at [phone number] or [web site].
- **Triple rinse** container **(or equivalent)** promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Summary Diagram



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EPA web site

- www.epa.gov/pesticides
- Select "Regulating pesticides"
- Select "Storage and disposal"
- Select "Container and containment regulations"