

EPA's Pesticide Container-Containment Regulations

Agricultural Retailers Association

June 11, 2009

Agenda

- Overview
- Containment
 - Federal vs. state regulations
 - Compliance date
 - Scope
 - Requirements for secondary containment & pads
- Refillable containers
- Repackaging

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



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 Requirements	<ul style="list-style-type: none"> - DOT container design, construction & marking standards - Dispensing capability - Standard closures - Residue removal (99.99% removal) 	<ul style="list-style-type: none"> - DOT container design, construction & marking standards - One-way valves or tamper-evident devices - Vent, gauge & shutoff valve standards for large tanks 	<ul style="list-style-type: none"> - Registrants & refillers comply with specified conditions - Registrants develop & provide certain information - Refillers obtain & follow information; and clean, inspect & label containers before refilling them 	<ul style="list-style-type: none"> - Identify container as nonrefillable or refillable (<i>all</i>) - Statement to prohibit reuse and offer for recycling; batch code (<i>all nonrefillables</i>) - Cleaning instructions (<i>some nonrefillables</i>) - Cleaning instructions before disposal (<i>all refillables</i>) 	<ul style="list-style-type: none"> - Secondary containment structures (dikes) around large tanks - Containment pads for pesticide dispensing areas - Good operating procedures - Monthly inspections of tanks & structures
Compliance Date	Aug 17, 2009	Aug 17, 2011	Aug 17, 2011	Aug 17, 2010	Aug 17, 2009

Rule Overview: Who & What?

■ Retailers

- Containment
- Refillable containers
- Repackaging

■ Registrants

- All of the above
- Nonrefillable containers
- Labels

Pesticide Containment Requirements

Pesticide Containment

1. Do the federal containment regulations apply **to my State or Tribe?**
2. **When do facilities have to comply** with the federal containment regulations?
3. **Which facilities** must comply with the federal containment regulations?
4. **What** do the federal containment regulations **require?**

1. Federal or State Regulations?

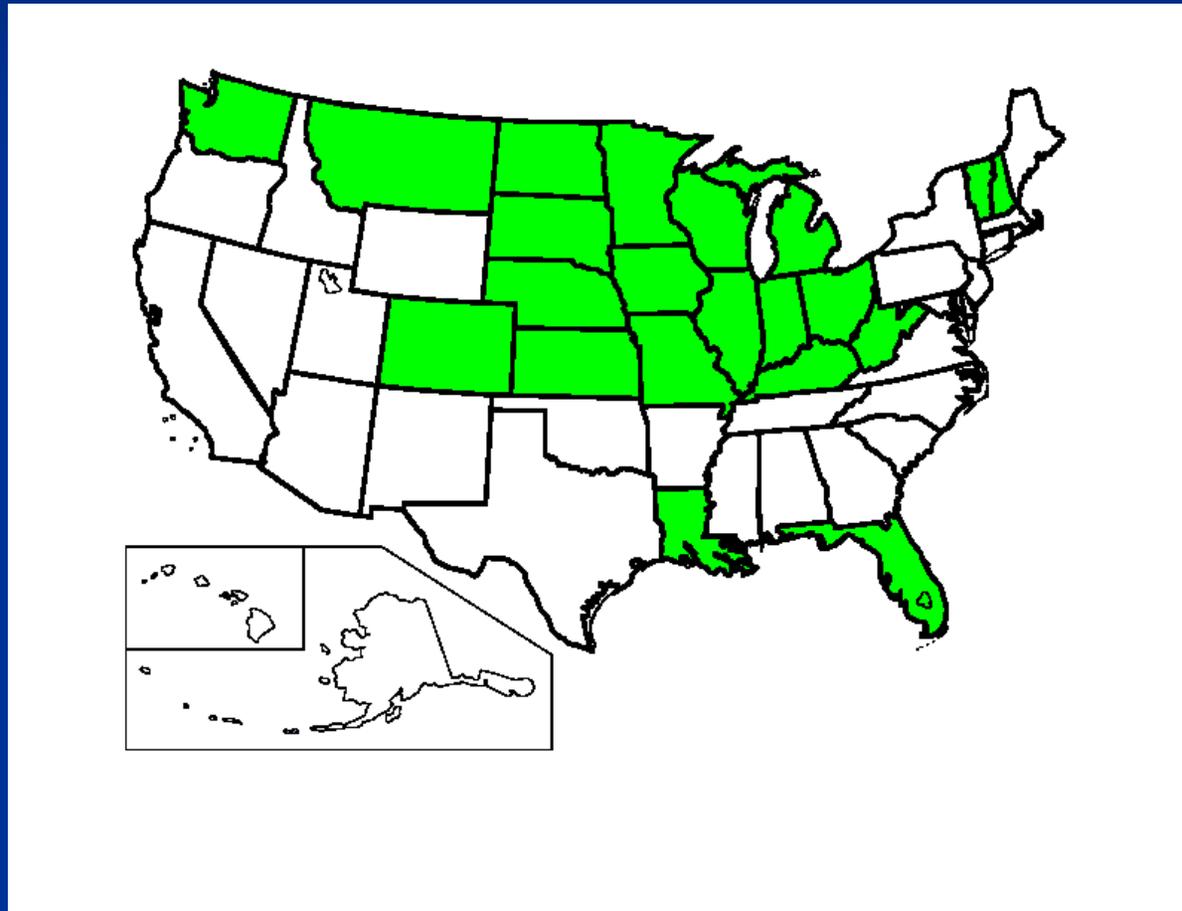
§165.97

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.

States with Pesticide Containment Regs

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



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.
- EPA's Office of Pesticide Programs (OPP) makes the determinations of equivalency; working with Regions, HQ attorneys & HQ enforcement through process
- OPP will notify state of determination by letter

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 for States & Tribes:

1. Implement federal containment regulations
 - Default option; no State/Tribal regulations
2. Issue State/Tribal regulations that incorporate federal containment regs by reference or that are identical to federal containment regs
3. 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)

2. Compliance Date

§165.80(c)

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
- EPA Headquarters is revising the compliance strategy for this rule; will allow states to conduct compliance assistance for containment during 2009 and 2010, at the state's discretion.

3. Scope of the Containment Regulations

§165.81 and §165.82

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?



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



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...

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.



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** \geq 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.**



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).

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 several 5,000-gallon tanks that are clearly stationary storage tanks. 

Is a containment pad required?

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

- **Scenario 5:** The retailer transfers from that tank to refill minibulk containers? 
- **Scenario 6:** The minibulks are rinsed before they are refilled? 
- **Scenario 7:** 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 8:** The retailer goes to a farm and refills a minibulk container at the farm? 

Is containment required?

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 9:** Does this repackaging have to happen on a pad? 
- **Scenario 10:** Does the 300-gallon minibulk container have to be in secondary containment? 

4. Containment Requirements

§165.85 - §165.95

What do federal containment regs require?

A. General design requirements for pads & secondary containment

- Construction materials, liquid-tight, compatible
- Protect appurtenances, pipes/drains, stormwater

B. Specific requirements for pads & secondary containment

- Minimum capacity requirements
- Anchor or elevate stationary tanks
- Pad specifications

C. Operational, maintenance, inspection & recordkeeping requirements

4.A. General Design Requirements for Secondary Containment Units and Pads

§165.85(a) & (b): New structures

§165.87(a) & (b): Existing structures

Structural Integrity

- The containment structure must be constructed of steel, reinforced concrete or other rigid material capable of withstanding the full hydrostatic head, load and impact of any pesticides, precipitation, other substances, equipment and appurtenances placed within the structure.
- First sentence of §165.85(a)(1) and §165.87(a)(1).

Liquid-Tight

- **The structure must be liquid-tight with cracks, seams and joints appropriately sealed.**
- Second sentence of §165.85(a)(1) and §165.87(a)(1)

Compatibility

- The containment structure must be made of materials compatible with the pesticides stored. In this case, compatible means able to withstand anticipated exposure to stored or transferred substances and still provide containment of those same or other substances within the containment area.
- §165.85(a)(3) and §165.87(a)(3)

Materials: Photo 1



Materials: Photo 2

The walls and base are constructed of reinforced concrete and are covered by a liner.



Materials: Photo 3



Materials: Photo 4



Materials: Photo 5



Appurtenance Protection Standard

- You must protect appurtenances and pesticide containers against damage from operating personnel and moving equipment. Means of protection include, but are not limited to, supports to prevent sagging, flexible connections, the use of guard rails, barriers, and protective cages.
- §165.85(b)(1) and §165.87(b)(1)

Appurtenance Protection – Photo 6



Appurtenance Protection – Photo 7



Drains or Pipes Through Structures

- New structures: Appurtenances, discharge outlets or gravity drains must not be configured through the base or wall of the containment structure, except for direct interconnections between adjacent containment structures which meet the requirements of this subpart.
- Existing structures: Must seal appurtenances, discharge outlets or gravity drains through the base or wall of the containment structure
- New structures: Appurtenances must be configured in such a way that spills or leaks are easy to see.
- §165.85(b)(2) & §165.87(b)(2)

Stormwater Protection Standard

- **The containment structure must be constructed with sufficient freeboard to contain precipitation and prevent water and other liquids from seeping into or flowing onto it from adjacent land or structures.**
- “Freeboard” refers to the height of the structure compared to the ground (or surface) surrounding it.
 - A 6-inch curb would have a freeboard of 6 inches.
 - A secondary containment unit with walls that are 2 feet high would have a freeboard of 24 inches.

Stormwater Protection: Photo 8



Stormwater Protection: Photo 9



New vs. Existing Structures

- A new containment structure is one whose installation began after November 16, 2006.
- An existing containment structure is defined as one whose installation began on or before November 16, 2006.
- All of the “general design requirements” in §165.85(a) & (b) and §165.87(a) & (b) are identical for new and existing structures except for the requirement about drains and pipes through structures.

4.B. 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

Secondary Containment: Capacity

- Secondary containment for liquid pesticides must have a capacity of the volume displaced by other containers & appurtenances AND:
 - 100% of the largest stationary pesticide container if:
 - New structure, protected from precipitation
 - All existing structures
 - 110% of the largest stationary pesticide container if:
 - New structure, not protected from precipitation
- §165.85(c)(1) & (2) and §165.87(c)(1)

Secondary Containment: Flotation

- You must anchor or elevate each stationary container of a liquid pesticide to prevent flotation in the event that the secondary containment unit fills with liquid.
- §165.85(d) and §165.87(d)



Containment Pads

Containment pads must:

- Be designed & constructed to intercept leaks & spills
- Have enough surface area
- Allow for removal & recovery of spilled, leaked, or discharged material and rainfall
- Have pumps that are manually-activated or that have automatic overflow cutoff switches on receiving containers.
- Have a minimum capacity (volume)
- New pads only: have a sloped surface.
- §165.85(e) and §165.87(e)



Containment Pad: Surface Area



- A pad must have enough surface area to extend completely beneath any container on it, except for transport vehicles, where the surface area must accommodate at least the portion of the vehicle where the delivery hose couples to the vehicle.
- §165.85(e)(2) & §165.87(e)(2)

Containment Pad: Volume

- A containment pad must have a capacity of at least 750 gallons or 100% of the largest vehicle/container on it, whichever is smaller.
- Examples:
 - 5,000-gal tanker truck is largest vehicle/container
 - Required volume: at least 750 gallons
 - 1,000-gal application tank is largest vehicle/container
 - Required volume: at least 750 gallons
 - 250-gal application tank is largest vehicle/container
 - Required volume: at least 250 gallons
- §165.85(c)(3) & (4) and §165.87(c)(2) & (3)

Dry Bulk Containment

Stationary containers that hold at least 4,000 pounds of dry pesticide must be:

- Protected from wind & precipitation;
- On pallets or raised concrete platforms;
- On a floor and enclosed by a curb at least 6 inches high that extends at least 2 feet beyond the perimeter of the container.
- §165.85(f) and §165.87(f)



**4.C. Operational,
Inspection, Maintenance
& Recordkeeping
Requirements**

§165.90 and §165.95

Operational Procedures

Someone from the facility must:

- Manage the structure in a manner that prevents pesticides or materials containing pesticides from escaping from the containment structure;
- Collect & recover the spilled pesticide in a way that will not harm human health and the environment and that ensures maximum practicable recovery of the pesticide;
- Clean up the spill by the end of the day;
- Use the spilled material per label instructions or dispose of it in accordance with applicable laws & regs; and
- Attend the transfer.
- §165.90(a)

Inspection Requirements

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



Maintenance Requirements

A facility must initiate repair to any areas showing visible signs of damage and seal any cracks and gaps in the containment structure or appurtenances with material compatible with the pesticides being stored or dispensed **no later than the end of the day** on which damage is noticed and complete repairs within a time frame that is reasonable, taking into account the availability of cleanup materials, trained staff, and equipment. [§165.90(b)(2)]



Recordkeeping

- A facility must keep records of:
 - Inspection and maintenance
 - Any non-stationary pesticide containers that are at least 500 gallons or 4,000 pounds
 - The construction date of the facility.
- §165.95

5. 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

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

A. Refillable containers (August 2011)

- DOT packing group III standards
- Marking
- Tamper-evident device/one-way valve
- Requirements for stationary tanks

B. 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

5.A. Refillable Containers



DOT/United Nations Marking

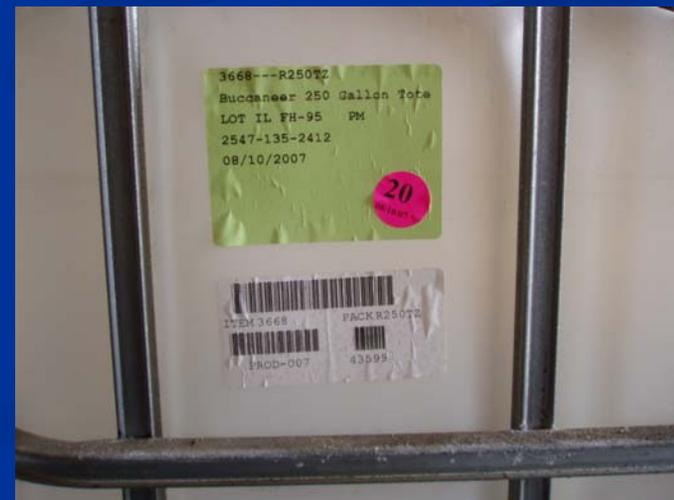
- All portable refillable containers must meet at least the DOT packing group III standards. [§165.45(a) & (b)]
- Example of DOT marking:
- un 1A1/Y 1.4/200/06/USA883466
- Important: look for X, Y or Z
 - X = meets PG I stds (most stringent)
 - Y = meets PG II stds
 - Z = meets PG III stds
- In DOT regs, 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)

DOT Requirements



Marking

All refillable containers (bulk tanks and portable containers) must be durably marked with a serial number or other identifying code. [§165.45(d)]



Tamper-Evident Device/One-Way Valve

For portable refillable containers holding liquid pesticides, each opening other than a vent must have a **one-way valve, a tamper-evident device, or both.** [§165.45(d)]



Tamper-Evident Device/One-Way Valve

- The valve at the bottom of this minibulk is not a one-way valve. The end user has to break the tamper-evident device to remove pesticide from the minibulk through this valve.
- This minibulk **complies with the refillable container regs**; it has a tamper-evident device.
- However, when the minibulk is returned, **the refiller must clean the minibulk**, even if he is refilling it with the same pesticide product.
[See§165.70(g) & (h).]



Stationary Tanks

Stationary tanks must:

- Meet integrity/strength standards
- Have a vent
- Have a shut-off valve on any connection below the normal liquid level
- Not have an external sight gauge. [§165.45(f)]



5.B. Repackaging



Repackaging: Requirements

- 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

Repackaging

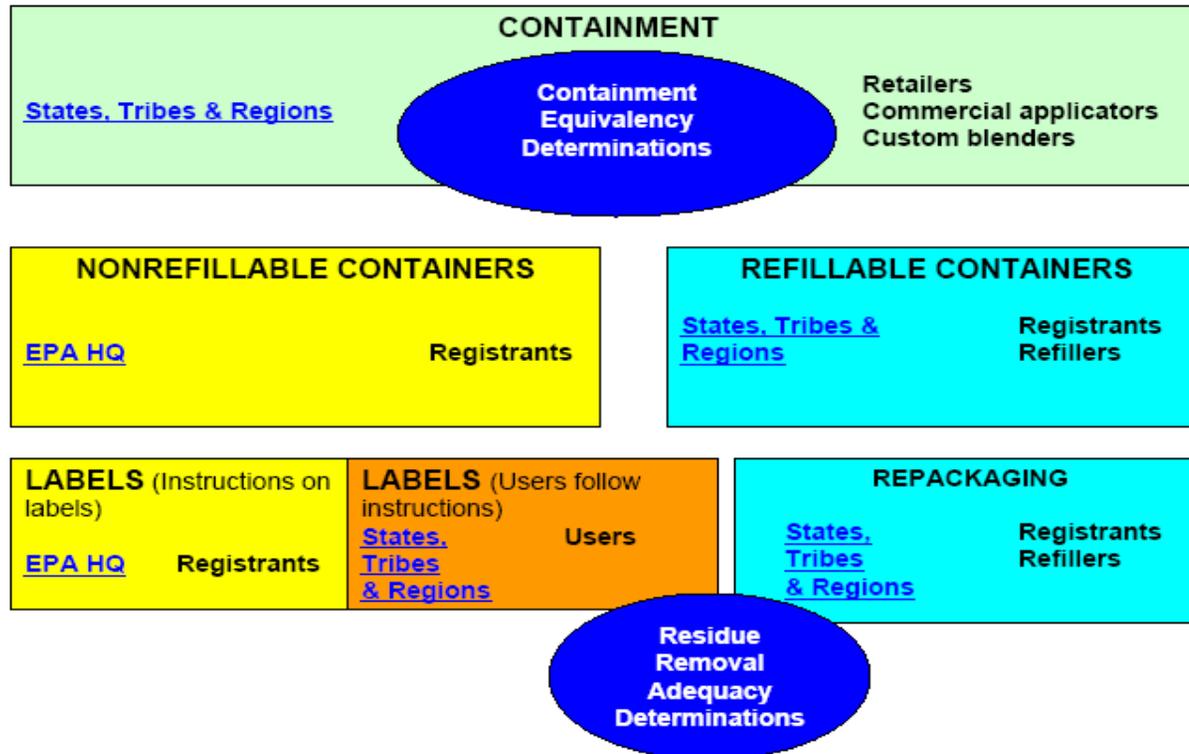
- The conditions for a registrant to allow an independent refiller to repack its product are set out in §165.67(b) for registrants and in §165.70(b) for independent refillers.
 - These conditions are intended to assure that the purposes of registration would be satisfied, as in the 1977 Bulk Policy.
 - 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.**

Repackaging: Criteria

The following conditions must be met for a registrant to allow repackaging by an independent refiller (see §165.67(b) & §165.70(b)):

- 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.

Summary Diagram



For More Information

- Allie Fields: 703-305-5391
- Nancy Fitz: 703-305-7385
- Jeanne Kasai: 703-308-3240
- Gibbs Moore: 703-605-0195
- David Stangel: 202-564-4162
 - E-mail addresses: lastname.firstname@epa.gov

EPA web site

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