MINNESOTA DEPARTMENT OF AGRICULTURE
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FACT SHEET

# Pesticide Storage: Bulk Requirements

This fact sheet was prepared by the Minnesota Department of Agriculture to provide guidance to those persons who handle and store small package pesticide and fertilizer at their facilities. This guidance is intended to supplement - not replace - Federal and State laws

## DEFINITIONS

***Bulk Pesticide***
"Bulk Pesticide" means a liquid pesticide that is held in an individual container with a pesticide content of 56 U.S. gallons or more, or 100 lbs. or more net dry weight, including mini-bulk pesticides unless otherwise specified. Only technical grade, formulated grade, and other similar grades are included in this definition. (MINNESOTA RULES PART 1505.3010, SUBP. 3)

***Mini-bulk Pesticide***
"Mini-bulk Pesticide" means an amount of liquid pesticide greater than 56 U.S. gallons (211 liters) but not greater than 499 U.S. gallons (1,892 liters), or an amount of dry pesticide greater than 100 lbs. (45 kilograms) but not greater than 499 lbs. (225 kilograms), that is held in a single container designed for ready handling and transport. (MINNESOTA RULES PART 1505.3010, SUBP. 13)

***Combination Dike/Load pad Areas***
A combination dike/load pad area is a safeguarded area that contains the storage tanks and the load pad together. Typically this consists of a 3 inch minimum curbing around both areas, or around the entire building.

***Substantial Alteration***
"Substantial Alteration" means modifying a bulk agricultural chemical storage facility by:
(1) changing the capacity of a safeguard
(2) adding storage containers in excess of the capacity of a safeguard as required by rule; or
(3) increasing the size of the single largest storage container in a safeguard as approved or permitted by the Department of Agriculture. This does not include routine maintenance of safeguards, storage containers, appurtenances, piping, mixing, blending, weighing or handling equipment. (MINNESOTA STATUTE 18B.01, SUBD. 30A)

## EPA REQUIREMENTS

1. Before you repackage bulk pesticides at your facility you must obtain an EPA Establishment number from EPA Region 5. Contact Pamela Grace at 312/353-2833.
2. Facilities that repackage pesticides must report their repackaging or "producing" activities by sending an Annual Production/Repackaging Report to EPA Region 5.

## PERMIT COMPLIANCE

A permit is required before storing a liquid bulk pesticide product in a storage container with a rated capacity of 500 U.S. gallons or greater or a dry bulk pesticide in a storage container with a rated capacity of 100 lbs. or greater. A permit is also required before a person substantially alters a bulk pesticide facility.

Firms who store bulk pesticides in mini-bulk containers with a rated capacity of less than 500 gallons are not required to obtain a permit, but are required to comply with all other applicable portions of the pesticide storage rules regarding storage and distribution.
(Minnesota Rules Part 1505.3010 - 1505.3150)

## SECONDARY CONTAINMENT

1. The capacity of the secondary containment area must be a minimum of 110% (roofed storage) of the largest container inside the dike or 125% (unroofed storage) of the largest container inside the dike. Displacement by other tanks in the containment must be calculated as well.
2. The secondary containment area must have liquid tight construction, using waterstops, keyways or monolithic concrete pours (pours without joints). Metal containment is acceptable, contact MDA for metal specifications.

3. The dike must be maintained to keep its liquid tight integrity. Cracks in the concrete must be sealed with compatible and resistant repair products and metal dikes must be sandblasted and painted on a regular basis to remain free of rust and corrosion. (see fact sheet Crack and Crevice Repair)
4. If the safeguard area is a combination dike/load pad, the tanks must be protected from the risk of moving vehicle damage by drive curbs or other vehicle protection devices.
5. The secondary containment may not contain a drain or similar opening. If such an opening exists it must be permanently plugged to prevent an incident. Underground plumbing in and through containment floors is not allowed. No other items may breach the secondary containment such as footings or wiring conduits
6. A secondary containment system constructed with prefabricated compatible materials (poly tubs, etc.) may be used but must meet all secondary requirements but may not be located in an area where fire could damage the containment.

## PESTICIDE STORAGE TANKS AND APPURTENANCES

1. Bulk pesticide tanks that contain pesticides must be stored in a secondary containment or dike area.
2. Pesticide storage containers must be constructed, installed and maintained to prevent the release of liquid or dry bulk pesticide.
3. Materials used in the construction or repair of pesticide storage containers must be compatible with the pesticide being stored.
4. Appurtenances on storage tanks and plumbing from the tank to and including the first valve must be stainless steel. In some cases where stainless steel is not compatible with a pesticide product or with the tank material such as aluminum, exemptions may be granted from the MDA. An exemption must be requested in writing.
5. All bulk pesticide storage tanks must be placed a minimum of one foot from a secondary containment wall.
6. Pesticide storage tanks over ten feet high located in outdoor secondary containment must be positioned at least three feet from the secondary containment wall.
7. Every pesticide storage container must bear a current pesticide product label as required by the EPA. The label must be complete and legible at all times.
8. Bulk pesticide containers must be secured against access by unauthorized persons and protected against access by wildlife. Usually this is accomplished by fencing (recommend 6 foot fencing), being located in a locked building, or all tank valves being locked.
9. Bulk pesticide containers must be anchored to prevent floatation or instability that may occur as a result of liquid accumulation in the secondary containment area.
10. Bulk pesticide containers and appurtenances, including transfer pipes, must be protected against damage caused by moving vehicles.
11. Mini-bulk containers are allowed within the secondary containment area, provided that the mini-bulks are elevated equal to the height of the dike wall and are set back at least one foot from the inside the dike wall. These mini-bulk containers (if less than 500 gallons) do not need to be permitted.

## LOAD AREA REQUIREMENTS

1. A load area is required any time a liquid bulk pesticide container is opened and pesticides are transferred from one container to another. This includes filling from a transport truck, filling application equipment from a bulk pesticide container or using a bulk pesticide container to impregnate fertilizer. Remember, mini-bulk containers are bulk by definition and any time you open a container it must be in containment or on a load area.
2. All load areas for liquid bulk pesticide transfers must have a minimum 3 inch curb regardless of its size. A dry pesticide load area does not have to be curbed but must be an elevated flat impermeable surface that is large enough to catch spilled material. Load areas must be constructed in a liquid tight manner. Dive in/out aprons must not exceed 1 foot of length per inch of curb height.
3. Load areas must be properly maintained. Cracks in concrete must be repaired with compatible and resistant materials to remain liquid tight. Metal load areas must be kept free of rust and corrosion by regular sandblasting and painting.

4. A load area may not contain a drain or similar opening. Any openings must be permanently sealed.

5. A load area may be designed with a sump. If this is the case the load area must be sloped to the sump or sediment trap and used only for temporary collection. The sump may not be greater than 2 feet deep or hold more that 109 U.S. gallons.

6. The minimum required capacity for a liquid bulk pesticide load area is as follows:

## PESTICIDE CONTAINER SIZE

| Pesticide Container Size | Required minimum Load Area Size |
|---|---|
| Mini-bulk 56 - 249 gallons | 250 gallons |
| Mini-bulk 250 - 499 gallons | 500 gallons |
| Bulk tanks 500 gallons or more | 1,000 gallons |

## SAFEGUARD INSPECTION

A bulk pesticide storage facility must be inspected and maintained on a regular basis. This includes inspecting storage containers, appurtenances, loading areas and secondary containment areas to ensure their integrity and minimize the risk of a pesticide release.

A written record of these inspections must be kept at the storage facility.

| Area to inspect | Schedule |
|---|---|
| Storage containers & appurtenances | weekly (when storing pesticides) |
| Secondary containment | monthly (when storing pesticides) |
| Loading areas | monthly (when storing pesticides) |

## SAFEGUARD MAINTENANCE

Maintenance of a bulk pesticide storage facility must be performed as necessary to ensure the integrity of the safeguards, including pesticide containers, secondary containment areas and loading areas. It is not only required that written inspection and maintenance records be kept but also very important for you especially if an incident occurs. If records can show a tank or valve was adequately maintained liability may not be an issue. On the other hand If records do not exist documenting either inspections or maintenance, it is assumed that these tasks were not conducted.

## INVENTORY

An inventory of bulk pesticides must be kept when pesticides are being stored.

Fixed Storage tank inventory records must contain the following:

a. beginning and end amounts of each fixed storage container at the time of each filling.

b. the amount of bulk pesticide delivered, sold and used.

c. the names of the persons keeping the inventory records.

## PESTICIDE RELEASES: RECOVERY, USE, OR DISPOSAL RINSATE MANAGEMENT

All pesticide releases occurring in an area confined to loading and secondary containment areas, including sludge, rinsates or pesticide contaminated precipitation, must be recovered, used and stored for later use or properly disposed.

Precipitation must not be allowed to accumulate in a loading or secondary containment area where:

(1) Capacity is reduced in the safeguard.
(2) Corrosion to tanks and appurtenances is accelerated.
(3) Tank stability is reduced or compromised.

## INCIDENTS/RELEASES

All pesticide releases must be reported to the Minnesota Duty Officer at **649-5451(local) or 1-800-422-0798** as soon as possible.

## INCIDENT OR RELEASE RESPONSE PLAN

The operator of a bulk pesticide storage facility must prepare a written release response plan. The plan must include specific items (See fact sheet Guidelines for Developing and Maintaining an Incident Response Plan). This fact sheet provides guidelines for a plan and offers a suggested format for plan development. All facilities that have bulk pesticides must also train their employees in release response. Training must be documented.

## FURTHER INFORMATION

For questions please contact Greg Harding at 651/201-6274 or e-mail greg.harding@state.mn.us.