

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

INTERIM STANDARD

PORTABLE AGRICHEMICAL MIXING STATION

(Ea.)

CODE 703

DEFINITION

A portable device to be used in the field to reduce unintentional release of agrichemicals to the environment during agricultural operations.

PURPOSE

To reduce pollution of surface water, groundwater, and soil by providing an impervious surface on which to safely mix and load chemicals, rinse chemical containers, and retain incidental spillage.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where: (1) the mixing of chemicals, rinsing of containers, and loading of spray equipment creates significant potential for pollution of surface water, groundwater, and/or soil; (2) an impermeable containment is required to properly manage chemical operations, and (3) permanent mixing facilities are absent or are impractical for the particular site or operation.

CRITERIA

Each chemical mixing station shall meet the needs of the user and shall be in conformance with this standard and all federal, state, and local laws. Each device shall be structurally sound and of durable materials commensurate with the anticipated service life, initial and replacement costs, safety, and environmental considerations.

Station Components

The portable mixing station shall include those components necessary to properly manage the chemical materials and prevent accidental release

to the environment. Components of a complete agrichemical mixing station shall include but not be limited to the following:

1. A portable impermeable pad for mixing of chemicals and rinsing chemical containers.
2. A system of hoses, nozzles, valves, pumps, etc., designed to: (a) safely transfer chemicals from the chemical containers to equipment spray tanks, (b) thoroughly rinse chemical containers, and (c) clean up and recover any liquid spilled onto the pad.
3. Adequate water supply for mixing chemicals, rinsing chemical containers and tanks, and rinsing the containment pad. Water is normally supplied from the nurse tank.

Design

The pad, hoses, pipes, valves, seals, connectors, filters, tanks, and related plumbing material must be compatible with the chemicals being handled. Suction hoses must be reinforced to withstand negative pressures.

The pad shall be constructed of impermeable material that is chemically inert and configured to securely position the chemical containers to avoid tipping and chemical spillage. The pad shall have a containment capacity at least equal to 1.25 times the volume of the largest individual chemical container to be used on the pad, and shall have a sump or other provisions for easy recovery of spilled liquid. The pad shall be of a size and weight that is easily transported from field to field.

Rinse devices shall be designed so that residual contents of chemical containers can be rinse directly from the container to the spray tank. The rinse device shall be adequate to thoroughly clean chemical containers of the size being used in the particular farming operation. The rinse system shall be designed to operate from the nurse tank

discharge pump or a separate pump that provides adequate pressure.

CONSIDERATIONS

Verify with the manufacturer of the mixing station that any pump to be used in pressure rising is compatible with the rinse device. Generally, positive displacement pumps should not be used.

Consider using a top/bottom-loading valve with built-in check valve in the hose from the nurse tank to the spray tank. This will enable the operator to remain on the ground while filling the sprayer.

PLANS AND SPECIFICATIONS

Portable mixing stations are manufactured items. Plans and specifications submitted by the manufacturer should be reviewed to insure that the

proposed mixing station meets the requirements of this standard.

OPERATION AND MAINTENANCE

Use appropriate personal safety devices such as gloves, eye protection, and respirator when mixing and handling agrichemicals. Always follow the manufacturer's instructions when operating a portable mixing station. Never leave the mixing station unattended during any mixing or filling operation. If a top/bottom-loading valve is not used, avoid potential back siphoning by always keeping the discharge end of the fill hose above the water level in the spray tank. Repair any breaks, leaks, or damaged components immediately.

Prior to first use and at the beginning of each season, check the unit for proper operation using only clean water. For winter storage, drain all water from the unit to avoid freeze damage.