

NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD

**AGRICHEMICAL HANDLING FACILITY**

(no.)

**CODE 702 CA INTERIM**

**DEFINITION**

An Agrichemical Handling Facility (AHF) is a permanent structure used in the mixing, loading, unloading, and rinsing operations involved in the handling of on-farm chemicals, such as pesticides and fertilizers.

**PURPOSES**

To provide for capture, collection, recovery, and storage of agrichemical spills and rinsate in order to minimize the potential for pollution.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where (1) current methods of mixing agrichemicals and rinsing of equipment are polluting or have the potential for polluting resources and (2) nutrient and/or pest management plans have been developed which include the reuse or disposal of materials resulting from operation of the AHF.

**CRITERIA**

**General**

The containment structure shall be comprised of a concrete pad, a depressed catchment sump, and storage tanks(s). It shall also include all necessary equipment for pumping, transferring and storing contaminated water that has been collected in the catchment sump. Roofing the facilities are not required but highly recommended.

Measures shall be included to divert runoff from adjacent areas resulting from a 100-year, 24 hour duration storm event.

The AHF shall not be located on floodplains unless it is protected from inundation or damage from a 100-year flood event and shall be located outside wetland areas.

Except for access, the surface perimeter of the concrete pad shall be a minimum of 6 inches above the surrounding ground surface. Access shall be a graveled or paved ramp with a maximum slope of 15 percent (6.5:1). All other areas around the pad shall be established with vegetation if practical.

All concrete materials shall comply with the requirements of ACI 318.

The containment volume for a roofed AHF shall be 125 percent of the volume of the largest spray equipment tank that will be used on the pad plus the volume of the 2-year 24-hour storm event on the surface of the concrete pad area.

The facility and components shall comply with applicable federal, state and local laws and regulations.

**Concrete pad**

The concrete pad shall be designed as a slab-on-grade with a positive slope of at least 2 percent (1/4 inch per foot) from all areas toward the catchment sump.

The concrete pad shall be curbed at its edges to prevent runoff and run-on.

The minimum dimensions of the concrete pad shall be sufficient to accommodate the existing or anticipated equipment.

The required thickness and reinforcement of the slab shall be designed for wheel loads of the existing or anticipated equipment. Design should be based on methods described in ACI 360R. "Design of Slabs on Grade" or other similar industry guides. The slab shall be designed to minimize cracking. Joints will be designed with appropriate water stops.

**Catchment Sump**

The catchment sump provides the facility a collection point for spillage, rinsate, sediment, and other debris. Its size should be kept to the minimum necessary to serve the purpose. The catchment sump shall be watertight and constructed of non-corrodible material such as monolithically-poured concrete, plastic, coated steel and fiberglass. It shall be covered with corrosion resistant grating of sufficient size to allow access for cleaning. Design loadings for the grate shall be the wheel loads used in design of the pad.

Roof. The roof, if provided, shall cover the entire AHF and shall extend sufficiently to prevent precipitation from accumulating on the concrete pad.

The minimum clearance between the lowest chord of the roof and highest area on the concrete pad shall provide clearance for the spray equipment and shall not be less than 10 feet.

The roof shall be designed for the minimum loads contained in ASAE EP288.4, "Agricultural Building Snow and Wind Load."

**Pump.** The pump shall be properly anchored and be corrosion resistant.

**Storage tank(s).** Provision shall be made for storage containment volume of the AHF. This volume may be provided with storage tank(s) dedicated to this purpose used alone or in combination with spray equipment tanks or other farm tanks that are reliably available.

Dedicated storage tank(s) shall be permanently installed above the grade of the concrete pad or an adjacent concrete pad and shall be constructed of non-corrosive material(s).

**Piping.** Piping shall be made of corrosion resistant materials. Piping and pump(s) used for transfer of contaminated water shall be designed for ease of inspection and replacement. To this end, piping and pump(s) shall be located above the grade of the concrete pad and catchment basin to the greatest extent possible. Design shall also consider recovery leakage from piping should it occur by locating it within the boundaries of the concrete pad or by other means.

A principal backflow prevention valve that complies with local plumbing codes shall be installed as close to the pad as possible on the main clean water line serving the pad before cross connecting with contaminated sources or other non-potable water supplies. Backflow prevention devices shall also be installed between the pump and the storage tank(s) and between the storage tank(s) and spray equipment.

Piping and pumps(s) shall be designed to facilitate drainage for winter shutdown.

## **CONSIDERATIONS**

Consideration shall be given to the following;

1. Availability of water and distance to water sources
2. On-farm traffic patterns and accessibility to chemical application areas and chemical storage.
3. Adjacent to land uses and visibility
4. Effects of chemical drift on surrounding areas due to prevailing winds.
5. Need for an emergency area with a faucet and a shower with a pull chain, for the washing to eyes, face and body in the event of an accidental exposure to chemicals.
6. Need for a loading platform to facilitate the filling and/or rinsing of spray equipment.

7. Compatibility of architecture and materials with surrounding buildings.
8. Proximity of wells, surface water, waterlines, property lines, roads, and populated buildings.
9. Impact on existing cultural resources.
10. Applicable Federal, State and local laws and regulations.

## **Water Quantity**

This practice is considered to have no effect on the amount of water.

## **Water Quality**

This practice principally reduces the availability of agrichemicals that could pollute surface water by providing a central location for handling and storage of chemicals.

## **Cultural Resources Considerations**

NRCS's objective is to avoid any effect to cultural resources and protect them in their original location. Determine if installation of this practice will have any effect on any cultural resources.

Document any specific considerations for cultural resources in the design docket and the Practice Requirements worksheet.

GM 420, Part 401, the California Environmental Handbook and the California Environmental Assessment Worksheet provide guidance on how the NRCS must account for cultural resources. The Field Office Technical Guide, Section II contains general information, with Web sites for additional information.

## **Endangered Species Considerations**

Determine if installation of this practice, along with any others proposed, will have an effect on any federal or state listed Rare, Threatened or Endangered species or their habitat. NRCS's objective is to benefit these species and others of concern, or at least not have any adverse effect on a listed species. If the Environmental Evaluation indicates that the action may adversely affect a listed species or result in adverse modification of habitat of listed species which has been determined to be critical habitat, NRCS will advise the land user of the requirements of the Endangered Species Act and recommend alternative conservation treatments that avoid the adverse effects. Further assistance will be provided only if the landowner selects one of the alternative conservation treatments for installation; or at the request of the landowners, NRCS may initiate consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service and/or California

Department of Fish and Game. If the Environmental Evaluation indicates the action will not affect a listed species or result in adverse modification of critical habitat, consultation generally will not apply and usually would not be initiated. Document any special considerations for endangered species in the Practice Requirements Worksheet.

Some species are year-round residents in some streams, such as, freshwater shrimp. Other species, such as steelhead and salmon, utilize streams during various seasons. Be aware that critical periods, such as spawning, eggs in gravels and rearing of young may preclude activities in the stream that may directly affect the stream habitat during those periods. For example, there should be no disturbance of stream gravel beds that may have eggs in them. That could include any equipment in the stream or even walking in the stream or work upstream that may result in sediment depositing in the gravel beds. Document any special considerations for endangered species in the Practice Requirements Worksheet.

#### **PLANS AND SPECIFICATIONS**

The construction drawings and specifications developed for AHF's shall comply with this standard. The following statement shall appear on the cover sheet of all construction drawings for AHF's:

"Management of chemicals is the responsibility of the owner/operator and will be done in accordance with applicable federal, state, and local laws and regulations."

#### **OPERATION AND MAINTENANCE**

An operation and maintenance plan shall be developed that is consistent with the purposes of the AHF, its intended life, and the criteria for design. The plan shall address:

1. Emptying storage tank(s) to accommodate accidental spills and rinsate prior to mixing and rinsing events.
2. Emptying and cleaning the catchment sump and concrete slab after spills or rinsing events.
3. Proper disposal/use of rinsate, exterior washway accumulated sediment and spillage water in accordance with the chemical's label requirements and federal, state, and local laws and regulations.
4. Periodic inspection of piping, pump(s) and testing backflow prevention devices.
5. Inspection for repair of cracks in concrete slab and catchment sump.
6. Proper precautions to reduce worker exposure in operation of the AHF.
7. Emergency response instructions in case of an accidental chemical spill, exposure, fire or other incident that could adversely affect environmental health.
8. Posting of signs that warn that hazardous chemicals are present.
9. Posting a condensed version of proper operating procedures for the AHF that is weather proof and easily noticed.