

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

INTERIM STANDARD
AGRICULTURAL FUEL CONTAINMENT FACILITY
(No.)

Code 701

DEFINITION

An on-farm facility designed to contain potential spillage and pollutants from above-ground fuel storage tanks.

PURPOSE

To prevent contamination of soil, water, and other resources by leakage or spillage from agricultural fuel storage tanks.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to areas:

- (1) where primary above-ground storage and distribution of fuel for agricultural operations occur, and
- (2) where spillage of fuels would pose a threat to soil, water, and other resources, and
- (3) where soils and topography are suitable for construction.

CRITERIA

Federal, state, and local laws. All planned work shall comply with all federal, state, and local laws and regulations. The owner/operator shall be responsible for securing all required permits or approvals and for operation and maintenance requirements in accordance with such laws and regulations.

General. The facility shall be designed to contain at least 110% of the volume of the largest tank within the facility. Structural design of the containment facility, including earthen embankments and roofed structure (if

applicable), shall be in accordance with Conservation Practice Standard, Code 313 - Waste Storage Facility. If the facility is roofed, non-combustible materials shall be used and provisions shall be made to ensure free air circulation. If the facility is unroofed, provisions shall be made utilizing a pipe, valve, and lock to provide manually controlled drainage of rainwater from the facility. Pipes through the containment structure shall be a minimum 2 inches in diameter and be installed to be water-tight utilizing water-stops, gaskets, caulk, anti-seep collars, or other appropriate measures.

The fuel containment facility shall be an integral part of a Spill Prevention Control and Countermeasures (SPCC) plan (use form AL-ENG-50 or similar document) for all onsite fuel or chemical storage tanks or containers.

The bottom of fuel storage tanks shall be elevated at least 12 inches above the containment facility floor to facilitate leak detection.

Location. Fuel storage shall be located at least 50 feet from any other building, as far as practicable but no less than 100 feet from any water body, stream, or other water conveyance structure, at least 150 feet from an up-gradient well, and at least 300 feet from a down-gradient well. The facility shall not be located within a 100-year flood plain or in a wetland area.

Materials. Materials utilized for containment shall be compatible with the substance(s) contained. Acceptable materials for containment include compacted clay, bentonite or soil dispersant treated and compacted soil, synthetic liner, impervious concrete or concrete block, or double-wall tanks. Compacted clay, bentonite or

soil dispersant treated and compacted soil, and synthetic liner shall be designed and constructed in accordance with the liner requirement of conservation practice standard, Code 359 - Waste Treatment Lagoon. Concrete shall be a minimum 4,000-psi design mix. The concrete surface shall be made impervious by either treating the surface with a sealer or by placing the concrete with a slump of 3 inches or less and with 5 to 8 percent air entrainment. Concrete block shall be treated with a surface sealer. Concrete sealer shall form an impervious barrier and shall not deteriorate when in contact with fuel. All concrete construction joints will be made to be watertight.

Safety. Fuel storage facilities shall be properly marked with signs. As a minimum, a "Fuel Storage" sign and a "No Smoking" sign shall be placed near the fueling area.

The fuel containment facility shall be protected from accidental contact by vehicles, tractors, and other farm equipment.

Vegetation. All areas disturbed by construction of the facility will be vegetated according to Conservation Practice Standard, Code 342 - Critical Area Planting.

CONSIDERATIONS

Fuel tanks should have a fuel level gauge and all piping and connections to the tank should be at the top of the tank to avoid leaks or inadvertent spills.

Consider a roofed cover of non-combustible material over the containment facility to avoid the collection and possible contamination of rainwater.

Consider placement of the facility at a location where the high water table is 6 feet or more from the ground surface.

Consider fencing the facility to minimize unauthorized use or vandalism.

Consider the utilization of heavy use area protection (Conservation Practice Standard, Code 561) adjacent to the facility where fuel transfer vehicles will be located.

PLANS AND SPECIFICATIONS

Plans and specifications for an agricultural fuel containment facility shall be in keeping with this

standard and shall describe the requirements for applying the practice to achieve its intended purposes. Plans and specifications shall include construction plans, drawings, job sheets, or other similar documents. These documents shall specify the requirements for installing the practice, including the kind, dimensions, amount, material coatings, and quality of materials to be used.

OPERATION AND MAINTENANCE

Drip pans should be utilized with fuel tanks to collect minor leakages from valves, hoses, and other connections.

Valves for rainwater discharge from the fuel containment facility should remain locked until the water is properly inspected and any pollutants removed and properly disposed of. After observed discharge, valves should be immediately re-locked. A discharge log should be maintained by the owner/operator indicating the date of inspection, quality of discharged rainwater, and disposition of pollutants.

Soils contaminated by any spills should be immediately cleaned up or removed and disposed of in an approved manner according to the SPCC plan and ADEM's Field Operations Division, Contaminated Soil Management Guidelines. A written record of any spills that occur and clean-up action taken should be maintained by the owner/operator.

A responsible person should always be present during fuel conveyance.

All tanks, hoses, valves, etc., should be inspected on a regular basis and repaired as needed, with inspection and repair information noted in the inspection log.

REFERENCES

NRCS Alabama Conservation Practice Standards

Code 313 – Waste Storage Facility
Code 359 - Waste Treatment Lagoon
Code 342 - Critical Area Planting
Code 561 - Heavy Use Area Protection

ADEM Field Operations Division, Contaminated Soil Management Guidelines

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CONSTRUCTION SPECIFICATIONS

AGRICULTURAL FUEL CONTAINMENT FACILITY

(No.)
CODE 701**SCOPE**

This specification shall consist of the foundation preparation, earthfill placement, material requirements, other appurtenances, and services required for the construction of an agricultural fuel containment facility.

Construction shall be carried out in such a manner that erosion, water, air, and noise pollution will be minimized and held within legal limits as established by state and federal regulations.

The facility shall be constructed according to plans furnished by the Natural Resources Conservation Service (NRCS) or other qualified professionals, and in accordance with NRCS engineering standards for this practice, as well as any local codes or state laws. Prior to construction, the responsible engineer must approve any deviation from the approved drawings and specifications.

SPECIFICATIONS FOR AGRICULTURAL FUEL CONTAINMENT FACILITY**Foundation Preparation**

All obstructions shall be removed from the facility area and disposed of in specified disposal areas in a manner that will not cause pollution to

ground or surface water or interfere with drainage patterns or farming operations. Sod and topsoil shall be removed from the construction area and stockpiled for use in vegetation establishment. Any soft or undesirable material shall be removed and properly disposed of.

Any earthfill material required for foundation preparation will be placed and spread in lifts of 6 inches, compacted with at least 2 passes of heavy equipment, and approved by the responsible engineer prior to placement of the containment facility. The compacted material should be moist, not dry or saturated, to facilitate compaction.

Containment Materials

Detailed specifications for the compacted clay liner, bentonite or soil dispersant treated and compacted soil liner, synthetic liner, impervious concrete or concrete block wall liner, or double-wall tanks will be specified in the plan by the design engineer.

Timber Fabrication and Installation

Timber fabrication and installation shall be in accordance with the construction specifications in conservation practice standard, Code 313 - Waste Storage Facility.