**Section 670.401 Above Ground Tanks**

a) Primary Containment

For a new above ground tank a minimum shell thickness shall be provided which ensures that the above ground tank will not fail (leak, collapse, rupture, or otherwise rendered incapable of retaining the material).

b) Secondary Containment

1) Above ground tank storage areas at agrichemical facilities must have a secondary containment system that is designed and operated according to an Illinois Department of Agriculture permit (8 Ill. Adm. Code 255) and the endorsement by the Agency (authorized by Section 39.4 of the Act and using the standards and criteria from Subtitles B, C, and F of this Title 35); or

2) Above ground tank storage areas for other potential sources regulated under this Part must have a secondary containment system that is designed and operated as follows:

A) A base must underlay the above ground tanks that is free of cracks or gaps and is sufficiently impervious to contain leaks, spills and accumulated precipitation until the collected material is detected and removed;

B) The base must be sloped or the containment system must be otherwise designed and operated to provide for drainage and removal of liquids resulting from leaks, spills or precipitation, unless the above ground tanks are elevated or are otherwise protected from contact with accumulated liquids;

C) When not protected from receiving precipitation, the containment shall have a minimum containment volume of a 6-inch rain storm (a 25 year, 24 hour rain), plus the capacity of the largest above ground tank, and the volume displaced by the bases of the other above ground tanks located within the secondary containment structure;

D) When protected from receiving precipitation, the containment shall have a minimum containment volume of 100 percent of the capacity of the largest above ground tank, plus the volume displaced by the bases of the other above ground tanks;

E) Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in subsection (b)(2)(C) to contain any run-on which might enter the system; and

F) Spilled or leaked material and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

c) Detection and Recovery of Releases

1) Secondary containment systems must be:

A) Designed, installed and operated to prevent any migration of material or accumulated liquid out of the system to the soil, groundwater or surface water at any time during the use of the above ground tank system; and

B) Provide for detecting and collecting releases and accumulated liquids until the collected material is removed.

2) To meet the requirements of subsection (c), secondary containment systems must be, at a minimum:

A) Constructed of or lined with materials that are compatible with the material(s) to be placed in the above ground tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the material to which it is exposed, climatic conditions and the stress of daily operation (including stresses from nearby vehicular traffic);

B) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression or uplift;

C) Sloped or otherwise designed or operated to allow drainage and removal of liquids resulting from leaks, spills or precipitation. Spilled or leaked material and accumulated precipitation must be removed from the secondary contaminant system within 24 hours, or in as timely a manner as is possible, to prevent harm to human health and the environment, if the owner or operator demonstrates to the Agency that removal of the released material or accumulated precipitation cannot be accomplished within 24 hours.

d) Special Requirements for Incompatible Materials

1) Incompatible materials, wastes, and materials must not be placed in the same above ground tank.

2) An above ground tank holding a material that is incompatible with any other materials stored nearby in other above ground tanks, or other materials stored nearby in containers, piles, open tanks or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall or other device.

e) General Operating Requirements

1) Materials or treatment reagents must not be placed in an above ground tank system if they could cause the above ground tank, its ancillary equipment or the containment system, to rupture, leak, corrode or otherwise fail.

2) The owner or operator shall use appropriate controls and practices to prevent spills and overflows from an above ground tank or above ground tank systems. These include, at a minimum:

A) Spill prevention controls (e.g., check valves, dry disconnect couplings);

B) Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff or bypass to a standby above ground tank); and

C) Maintenance of sufficient freeboard in uncovered above ground tanks to prevent overtopping by wave or wind action or by precipitation.

f) Special Requirements for Ignitable or Reactive Material

Ignitable or reactive material must not be placed in above ground tank systems unless:

1) The material is stored or treated in such a way that it is protected from any material or conditions which may cause the material to ignite or react; or

2) The above ground tank is used solely for emergencies.

g) Closure

At closure of an above ground tank system, the owner or operator shall remove or decontaminate all residues, contaminated containment system components (liners, etc.), contaminated soils and structures and contaminated equipment.