Kansas Administrative Regulations

Kansas Department of Agriculture

Article 10.—Anhydrous Ammonia

4-10-6a. Transfers.

(a) Transfer to a permanent storage container shall be made only to a system displaying a current KDA-issued proof-of-inspection seal.

(b) Each container filled according to liquid level by any gauging method, other than a 85 percent fixed-length dip tube gauge, shall have a thermometer well and functional thermometer so that the internal liquid temperature can be easily determined and the amount of liquid in the container can be easily corrected to the volume the liquid would occupy at 60° F.

(c) A transfer shall not exceed one of the following:

(1) 85 percent of the container's capacity by volume; or

(2) 56 percent filling density for permanent storage containers or 54 percent filling density for implements of husbandry.

(d) The amount of anhydrous ammonia transferred shall be measured by one of the following:

(1) Weight;

(2) a liquid-level gauging device; or

(3) a flowmeter.

(e) Flammable gases, or gases that will react with anhydrous ammonia including air, shall not be used to transfer anhydrous ammonia.

(f) At least one attendant shall be present to monitor and control each transfer of anhydrous ammonia.

(g) Loading and unloading systems shall be protected to prevent a release if the transfer hose is severed.

(h) Each transfer shall occur only in the open air unless the transfer occurs within a structure specifically constructed for that purpose.

(i) (1) Only pumps and compressors designed for use with anhydrous ammonia shall be used.

(2) Liquid pumps and vapor compressors shall be designed for 250 psig working pressure.

(3) The pressure-actuated bypass valve and return piping shall be installed in accordance with the pump manufacturer's instructions.

(4) Each vapor compressor and liquid pump shall have an operational pressure gauge graduated from 0-400 psig at the inlet and at the outlet.

(5) Shutoff valves shall be installed within three feet of the inlet of a liquid pump and within two feet of the discharge. With vapor compressors, the shutoff valves shall be located as close as is practical to the compressor connections.

(j) The piping used to transfer anhydrous ammonia from a tractor trailer or railroad tank car into a permanent storage container shall be equipped with an excess flow valve and backflow pressure valve, which shall be located as close as practical to where the piping connects with the transfer hose.

(k) (1) During the removal of anhydrous ammonia from a transfer hose, the anhydrous ammonia shall be vented into an adequate supply of water.

(2) For purposes of this regulation, an adequate supply of water shall mean at least five gallons of nonammoniated water for each gallon of liquid ammonia or fraction of a gallon that could be contained in the hose.

(Authorized by and implementing K.S.A. 2-1212; effective March 12, 2010.)