

## **CHAPTER 19-20.2 ANHYDROUS AMMONIA FACILITIES**

### **19-20.2-01. Anhydrous ammonia safety rules.**

The agriculture commissioner shall adopt rules necessary to implement this chapter and adopt the 1989 American national standard safety requirements for the storage and handling of anhydrous ammonia, except sections 2.5, 5.2.1, 5.2.2.1, and 5.2.2.2. Sections 2.5, 5.2.1, 5.2.2.1, and 5.2.2.2 of the 1989 American national standard safety requirements are adopted as follows:

1. (2.5) Refers to paragraphs U-68, U-69, U-200, or U-201 of section VIII of the boiler and pressure vessel code of the American society of mechanical engineers, 1949 edition, or to section VIII division I of the boiler and pressure vessel code of the American society of mechanical engineers, 1950 edition, through the current edition including addenda and applicable code case interpretations.

Where referenced in this standard only section VIII division I of the American society of mechanical engineers code applies except that paragraphs UG-125 through UG-135 and paragraph UW-2 do not apply.

2. (5.2.1) Containers used with systems covered in sections 6, 9, 11, and 12 must be made of steel or other material compatible with ammonia and tested in accordance with the current American society of mechanical engineers code. An exception to the American society of mechanical engineers code requirements is that construction under table UW-12 at a basic joint efficiency of under eighty percent is not authorized.
3. (5.2.2.1) For new containers installed or purchased after January 1, 1996, the entire container must be post-weld heat treated after completion of all welds in or to the shells and heads. The method employed must be as prescribed in the American society of mechanical engineers code. It is recommended that post-weld heat treatment be performed in a furnace of a size sufficient to accommodate the entire container. Welded attachments to pads may be made after post-weld heat treatment. An implement of husbandry does not require post-weld heat treatment if the implement is fabricated with hot formed heads or with cold formed heads that have been stress relieved.
4. (5.2.2.2) Steels used in fabricating pressure containing parts of a container may not exceed a specified tensile strength of seventy thousand pounds per square inch [482636 kilopascals], as noted in the American society of mechanical engineers code, section II, part D, except that this does not apply to sections 8, 9, and 10. An implement of husbandry may be fabricated from steel having a specified tensile strength of seventy-five thousand pounds per square inch [517110 kilopascals].

#### **19-20.2-01.1. Definition.**

"Anhydrous ammonia storage facility" means a bulk anhydrous ammonia storage facility with a capacity exceeding six thousand gallons [22712.47 liters] which is owned or operated by a user or vendor of anhydrous ammonia.

### **19-20.2-02. License required - Existing anhydrous ammonia storage facilities.**

Any user or vendor of anhydrous ammonia owning or operating an anhydrous ammonia storage facility shall apply for an operator's license to the agriculture commissioner and the board of county commissioners of the county in which the facility is located. Any permanent anhydrous ammonia storage facility constructed before July 1, 1985, is exempt from the siting requirements of this chapter and may receive a license under this chapter regardless of noncompliance with the siting requirements. The commissioner may deny a license for failure to remit the proper fee with the application or failure to comply with the rules adopted pursuant to this chapter. The license is valid indefinitely but may not be transferred.

**19-20.2-03. License required - Anhydrous ammonia facilities constructed after June 30, 1985.**

No anhydrous ammonia storage facility may be operated without a license issued by the agriculture commissioner and the board of county commissioners of the county in which the facility is constructed. An application for a license to site and operate an anhydrous ammonia storage facility must be made to the agriculture commissioner and to the board of county commissioners. The commissioner or the board may deny a license for failure to remit the proper fee to the agriculture commissioner, for failure to comply with the siting requirements of this chapter and rules adopted pursuant to this chapter if constructed after June 30, 1985, or for failure to comply with local siting requirements. The agriculture commissioner also may deny a license if the facility does not meet the initial inspection standards required by this chapter and by any rules adopted pursuant to this chapter. In order to obtain a license, an individual shall submit two sets of drawings or photographs and signed affidavits stating and showing the facility has been measured and meets the siting requirements along with the application for license. The drawings or photographs must show the proposed location of the tank, the locations, and the surroundings in all directions. One set of drawings or photographs is for the agriculture commissioner and the other is for the board of county commissioners.

**19-20.2-04. State license fee.**

The agriculture commissioner shall charge a one-time fee for a license for each anhydrous ammonia storage facility. The licensing fee is twenty-five dollars for an anhydrous ammonia storage facility and one hundred dollars for each retail and storage site. Expansion of an existing anhydrous ammonia storage facility, including the expansion of a facility constructed before July 1, 1985, does not require reapplication for licensing, but all siting requirements must be met. When an anhydrous ammonia storage facility changes ownership, the new owner shall obtain a license.

**19-20.2-05. State siting requirements - Anhydrous ammonia storage facilities constructed after June 30, 1985.**

For facilities constructed after June 30, 1985:

1. Any anhydrous ammonia storage facility with a container nominal capacity of less than one hundred thousand gallons [378541.2 liters] must be located at least:
  - a. Fifty feet [15.24 meters] from the line of any adjoining property, which may be built upon, or any highway or railroad mainline.
  - b. Four hundred fifty feet [137.16 meters] from any place of public assembly or residence, other than the company's business office.
  - c. Seven hundred fifty feet [213.36 meters] from any institutional residence.
2. Any anhydrous ammonia storage facility with container nominal capacity of one hundred thousand gallons [378541.2 liters] or more must be located at least:
  - a. Fifty feet [15.24 meters] from the property line of adjoining property, which may be built upon, or any highway or railroad mainline.
  - b. Six hundred feet [182.88 meters] from any place of public assembly or residence, other than the company's business office.
  - c. One thousand feet [300.48 meters] from any institutional residence.
3. Upon relocation of any permanent storage container to an anhydrous ammonia storage facility, the container must be hydrostatically pressure tested at the maximum allowable working pressure of the vessel or wet fluorescent magnetic particle tested, also referred to as black light tested. Before the container may be put into service and before licensing may occur, proof of testing must be supplied to the county and the agriculture commissioner.
4. All valves and other appurtenances to any anhydrous ammonia storage facility must be protected against physical damage. All shutoff valves must be kept closed and locked when not in use and when the facility is unattended.
5. Any anhydrous ammonia storage facility relocated or constructed after August 1, 1995, may not be located within city limits, unless approved by the city.

### **19-20.2-06. Transfer hose requirements.**

The following requirements apply to any transfer hose utilized at an anhydrous ammonia storage facility:

1. Any liquid transfer hose that is not drained of liquid upon completion of transfer operations must be equipped with an approved shutoff valve at the discharge end.
2. A hydrostatic relief valve or equivalent must be installed in each section of hose or pipe in which liquid ammonia can be isolated between shutoff valves to relieve the pressure that could develop from the trapped liquid. If an equivalent pressure relief device is used, the maximum accumulated pressure possible within the system may not exceed the limits of the system. A hydrostatic relief valve must be installed between each pair of valves in which liquid is trapped. The start-to-discharge pressure setting of the relief valve must not be less than three hundred fifty pounds per square inch [2413.18 kilopascals] gauge nor more than four hundred pounds per square inch [2757.92 kilopascals] gauge.
3. A transfer hose must have etched, cast, or impressed on the outer coating all of the following:
  - a. The words "ANHYDROUS AMMONIA".
  - b. The maximum working pressure of the transfer hose.
  - c. The name of the manufacturer of the hose.
  - d. The date of manufacture or the expiration date of the hose.
4. A transfer hose cut, scraped, cracked, or weathered so that the inner white cord is visible must be replaced. A transfer hose with an expiration date printed on the hose must be replaced prior to that date. Transfer hoses without an expiration date must be replaced as follows:
  - a. Rayon hoses must be replaced within two years of the date of manufacture.
  - b. Nylon hoses must be replaced within four years of the date of manufacture.
  - c. Steel-reinforced hoses must be replaced within six years of the date of manufacture.

Notwithstanding the replacement dates determined under this subsection for transfer hoses with or without an expiration date, an additional year must be allowed for replacement of transfer hoses in order to take into account delays in the original installation of transfer hoses.

#### **19-20.2-06.1. Pressure relief devices.**

Bulk storage containers constructed according to the American society of mechanical engineers code, and all nurse tanks, must be equipped with pressure relief valves constructed according to the American society of mechanical engineers code and capacity certified by the national board of boiler and pressure vessel inspectors. A pressure relief valve using nonmetallic seats must be replaced every five years with a new valve meeting the standards referenced in this section. A pressure relief valve using metallic seats must be tested every five years in lieu of replacement, and repairs, if deemed necessary, must be made by the valve manufacturer or by a safety valve repair organization having a valid "VR" certificate of authorization for the repairs from the national board of boiler and pressure vessel inspectors.

#### **19-20.2-07. Inspection.**

1. The agriculture commissioner shall develop and implement an initial and periodic inspection program for anhydrous ammonia storage facilities.
2. The agriculture commissioner shall inspect each anhydrous ammonia storage facility at least once every five years and may inspect any farm transportation wagon or vehicle designed to apply anhydrous ammonia which is in the vicinity of an anhydrous ammonia storage facility.
3. The agriculture commissioner may inspect any anhydrous ammonia storage facility where the commissioner has reason to believe violations of the safety standards under this chapter exist.
4. The agriculture commissioner may revoke or suspend the license of any anhydrous ammonia storage facility violating this chapter or the rules adopted under this chapter.

The commissioner may order the discontinuance of use of any farm transportation wagon or implement of husbandry which is found unsafe or hazardous.

**19-20.2-07.1. Reinstalled and secondhand anhydrous ammonia storage containers - Requirement.**

1. Before anhydrous ammonia may be stored in a reinstalled or secondhand container, including a nurse tank, the person intending to store the anhydrous ammonia shall furnish the agriculture commissioner with:
  - a. Evidence that the container is registered with the national board of boiler and pressure vessel inspectors; or
  - b. The manufacturer's data report for the container.
2. Subsection 1 is not applicable to the owner of an anhydrous ammonia storage container installed in this state before November 1, 1987, unless the storage container is reinstalled at another location.

**19-20.2-08. Promotion of safety - Use of excess fees.**

All fees collected under this chapter must be used by the agriculture commissioner to promote safety in anhydrous ammonia use and storage, in the administration of the program, and in the inspection of facilities.

**19-20.2-08.1. Anhydrous ammonia storage facility inspection fund.**

Repealed by S.L. 2011, ch. 168, § 9.

**19-20.2-08.2. Prohibitions.**

The following action is prohibited:

1. Filling a nurse tank directly from a railcar.
2. Filling or using a nurse tank that has an outdated hose.
3. Filling or using a nurse tank that has outdated relief valves.
4. Towing more than two nurse tanks on a public road.
5. Filling department of transportation transport containers not meeting the requirements of the department of transportation.
6. Filling anhydrous ammonia storage containers not meeting the requirements of this chapter.

**19-20.2-08.3. Anhydrous ammonia - Bulk delivery.**

Upon obtaining a commercial driver's license with an endorsement for hazardous materials, a person may transport anhydrous ammonia in a bulk delivery vehicle and may fill, from the bulk delivery vehicle, nurse tanks with anhydrous ammonia.

**19-20.2-08.4. Hydrostatic test procedures.**

Any hydrostatic test conducted under section 19-20.2-05 must comply with the requirements of the national board inspection code (ANSI-NB 23) and be conducted in a manner approved by the agriculture commissioner.

**19-20.2-08.5. Wet fluorescent magnetic particle test procedures.**

Any wet fluorescent magnetic particle test of a pressure vessel weld conducted under section 19-20.2-05 must comply with the requirements of the society for nondestructive testing SNT-TC-1A standard and must be conducted by a person certified as a level II technician by the society.

**19-20.2-09. Enforcement.**

1. The agriculture commissioner shall enforce the requirements of this chapter and any rules issued under it.

2. The commissioner may bring an action to enjoin the violation or threatened violation of this chapter, or any rule issued pursuant to this chapter, in the district court of the county in which the violation occurs or is about to occur.
3. The agriculture commissioner may issue a cease and desist order to any person allegedly violating this chapter. If any person violates the cease and desist order, the commissioner shall file the appropriate criminal complaint.
4. For the purpose of carrying out this chapter, the agriculture commissioner may enter upon any public or private premises at reasonable times to:
  - a. Inspect any equipment subject to this chapter and the premises on which the equipment is stored or used.
  - b. Inspect or investigate complaints.
  - c. Inspect any premises or other place where anhydrous ammonia or devices are held for distribution, sale, or use.
5. If a civil penalty pursuant to section 19-20.2-10 is imposed by the agriculture commissioner through an administrative hearing and the civil penalty is not paid, the commissioner may collect the civil penalty by a civil action in any appropriate court. Additionally, the commissioner may suspend or revoke a license issued pursuant to this chapter for failure to pay a civil penalty within thirty days after a final determination is made.

**19-20.2-10. Penalty.**

1. Any person violating this chapter is guilty of a class A misdemeanor.
2. When construing and enforcing this chapter, the act, omission, or failure of any officer, agent, or other person acting for or employed by any person is deemed to be the act, omission, or failure of the person as well as that of the person employed.
3. In addition to the criminal sanctions that may be imposed, a person found guilty of violating this chapter or the rules adopted under this chapter is subject to a civil penalty not to exceed five thousand dollars for each violation. The civil penalty may be imposed by a court in a civil proceeding or by the agriculture commissioner through an administrative hearing.

**19-20.2-11. Rules relating to security measures for nurse tanks.**

Repealed by S.L. 2013, ch. 187, § 18.