

Chapter Comm 43

ANHYDROUS AMMONIA

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Note: Chapter Ind 43 as it existed on November 30, 1985 was repealed and a new chapter ILHR 43 was created effective December 1, 1985. Chapter ILHR 43 was renumbered to be chapter Comm 43 by s. 13.93 (2m) (b) 1., and corrections made under s. 13.93 (2m) (b) 6. and 7., Stats., Register, May, 1998, No. 509. Chapter Comm 43 was repealed and recreated, Register, September, 2000, No. 537, eff. 10-1-00.

Subchapter I – Purpose and Scope

Comm 43.01 Purpose. The purpose of this chapter is to establish minimum safeguards to life, health and property by the adoption of reasonable and effective standards relating to the storage and handling of anhydrous ammonia.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.02 Scope. (1) APPLICATION. (a) This chapter applies to the design, construction, repair, alteration, location, installation, inspection and operation of anhydrous ammonia systems, including refrigerated ammonia storage systems, in public buildings and at places of employment. The provisions of this chapter are not retroactive unless specifically stated in the administrative rule.

(2) EXEMPTIONS. This chapter does not apply to all of the following:

- (a) Ammonia manufacturing plants.
- (b) Refrigeration plants where ammonia is used solely as a refrigerant.

Note: Refrigeration plants where ammonia is used as a refrigerant are covered in ch. Comm 45. The rules of ch. Comm 45 are not appropriate to refrigerated ammonia storage systems as covered in this chapter.

- (c) Ammonia transportation pipelines.
- (d) Ammonia barges and tankers.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.03 Local regulations. This chapter shall not limit the power of cities, villages and towns to make or enforce additional or more stringent regulations, provided the regulations do not conflict with this chapter, any other rule of the department, or law.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Subchapter II – Definitions

Comm 43.05 Definitions. In this chapter:

- (1) "Department" means the department of commerce.
- (2) "Place of employment" has the meaning specified under s. 101.01 (11), Stats.

Note: Under s. 101.01 (11), Stats., "place of employment" includes every place, whether indoors or out or underground and the premises appurtenant thereto where either temporarily or permanently any industry, trade or business is carried on, or

where any process or operation, directly or indirectly related to any industry, trade or business, is carried on, and where any person is, directly or indirectly, employed by another for direct or indirect gain or profit, but does not include any place where persons are employed in private domestic service which does not involve the use of mechanical power or in farming. "Farming" includes those activities specified in s. 102.04 (3), and also includes the transportation of farm products, supplies or equipment directly to the farm by the operator of said farm or employees for use thereon, if such activities are directly or indirectly for the purpose of producing commodities for market, or as an accessory to such production. When used with relation to building codes, "place of employment" does not include an adult family home, as defined in s. 50.01 (1), or, except for the purposes of s. 101.11, a previously constructed building used as a community-based residential facility, as defined in s. 50.01 (1g), which serves 20 or fewer residents who are not related to the operator or administrator.

(3) "Public building" has the meaning specified under s. 101.01 (12), Stats.

Note: Under s. 101.01 (12), Stats., "public building" means any structure, including exterior parts of such building, such as a porch, exterior platform or steps providing means of ingress or egress, used in whole or in part as a place of resort, assembly, lodging, trade, traffic, occupancy, or use by the public or by 3 or more tenants. When used in relation to building codes, "public building" does not include a previously constructed building used as a community-based residential facility as defined in s. 50.01 (1g) which serves 20 or fewer residents who are not related to the operator or administrator or an adult family home, as defined in s. 50.01 (1).

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Subchapter III – Administration and Enforcement

Comm 43.10 Plan examination and approval.

(1) DEPARTMENT APPROVAL. Department plan approval shall be obtained before commencing construction of any new or additional permanent storage installation for anhydrous ammonia.

(2) PLANS, SPECIFICATIONS AND INFORMATION. Plans, specifications and information submitted to the department for review and approval of anhydrous ammonia installations shall contain all of the following:

(a) At least 4 sets of plans, which are clear, legible and permanent copies; one copy of specifications; a completed application form; and the required fees.

(b) The name of the owner; the name of the person, firm or corporation proposing the construction or installation, if other than the owner; and the address of the installation, including the names of adjacent streets and highways.

(c) A plot plan, drawn to a minimum scale of one inch equals 20 feet, indicating the location of the installation with respect to property lines, lot lines, adjoining streets or alleys and other buildings on the same lot or property. The layout of buildings, containers, loading and unloading docks, type of construction of each building and any stream or body of water within 150 feet of the containers shall also be indicated.

(d) The location, size and capacity of each system and container.

(e) The type of container supports, clearances, type of venting and pressure relief used and combined capacity of all venting and relief valves on each container.

(f) A plot plan showing the land use of the area surrounding the proposed site for a distance of 2000 feet.

(3) **LOCAL APPROVAL.** Approval of a permanent storage installation site for anhydrous ammonia shall be obtained from the local fire department and shall be verified at the time of plan submittal.

(4) **ADDITIONAL APPROVAL.** Approval of plans is based upon compliance with the requirements of this chapter. Construction, installation and operation of anhydrous ammonia systems may be subject to compliance with additional requirements in state and local building codes, local zoning and similar ordinances.

(5) **APPLICATION FOR APPROVAL.** Application for approval of an anhydrous ammonia installation shall be made in writing on form SBD-6038.

Note: All forms referenced in this chapter are available at no charge from the department at the Safety and Buildings Division, P.O. Box 2509, Madison, WI 53701-2509, telephone 608/266-1818.

(6) **APPLICATION PROCESSING TIME.** The department shall review and make a determination on an application for installation approval within 15 business days of receiving all of the application materials required under subs. (2) and (3).

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.11 Revisions and modifications. (1) **PLAN REVISIONS.** (a) The changes specified in par. (b) to previously approved plans for anhydrous ammonia systems before commencement of system operation shall be submitted for review as a revision. Revised plans submitted for review shall include the department plan number for the original plans.

(b) Plans shall be submitted to the department for review for changes in tank location or capacity, piping arrangement or material, safety setback clearance, or point of transfer location.

(2) **ADDITIONS AND MODIFICATIONS.** Additions or modifications to anhydrous ammonia systems after commencement of system operation shall be submitted for review under s. Comm 43.10 as a new installation. A modification shall include the replacement of parts or components only if they are not identical in function.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.12 Revocation of approval. The department may revoke any approval issued under this chapter for any false statements or misrepresentation of facts upon which the approval was based.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.13 Departmental limitation and expiration of plan approval. Plan approval by the department or its authorized deputy shall expire one year after the date indicated on the approved plans, if construction has not commenced within that year.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.14 Enforcement and inspections. (1) **ENFORCEMENT.** This chapter shall be enforced by the department and its deputies, and by all local officials or bodies having jurisdiction to approve plans or specifications or issue permits for construction, alterations or installations within the scope of this chapter or having authority to investigate and eliminate related fire hazards.

(2) **INITIAL INSPECTIONS.** (a) Anhydrous ammonia systems which require approval under s. Comm 43.10 shall be inspected by the department.

Note: Local jurisdictional authorities may also conduct inspections in addition to those of the department.

(b) The installer shall notify the inspector of the department district in which the installation is located at least 5 business days prior to the start of construction to arrange for the inspection.

Note: The district inspector is indicated on the conditional approval letter.

(c) Anhydrous ammonia systems which do not require approval under s. Comm 43.10 may be inspected by local jurisdictional authorities to verify compliance with this chapter.

(3) **PERIODIC INSPECTIONS.** Permanent storage tanks for anhydrous ammonia exceeding 2000 gallons water capacity and all anhydrous ammonia nurse tanks located at storage facilities shall be inspected by the department at least once every 3 years.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.15 Permit to operate. (1) The owner or user of an anhydrous ammonia tank which requires periodic inspections under s. Comm 43.14 (3) shall be responsible for obtaining and maintaining a valid permit to operate.

(2) After each initial or periodic inspection, a permit to operate shall be issued by the department upon determination that the system meets the applicable requirements of this chapter. The department shall make that determination and issue a permit to operate within 15 business days of the inspection.

(3) The permit to operate shall be valid until the next required periodic inspection.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.16 Accident reporting. Whenever an accident occurs that relates to the operation an anhydrous ammonia installation and causes personal injury requiring professional medical attention, the owner or operator shall report the facts involved to the department within 2 business days.

Note: Accidents may be reported by calling the department district inspector where the installation is located or the department's Waukesha office at 262/548-8617.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.17 Petition for variance. The department shall consider and may grant a variance to a provision of this chapter in accordance with ch. Comm 3. The petition for variance shall include a position statement from the fire department having jurisdiction.

Note: Chapter Comm 3 requires the submittal of a petition for variance form (SBD-9890) and a fee, and that an equivalency is established in the petition for variance that meets the intent of the rule being petitioned. Chapter Comm 3 also requires the department to process regular petitions within 30 business days and priority petitions within 10 business days.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.18 Appeals. (1) **APPEAL OF DEPARTMENT ORDER.** Pursuant to s. 101.02 (6)(e), Stats., any person who owns or occupies a property that is affected by an order of the department may petition the department for a hearing on the reasonableness of the order.

(2) **APPEAL OF LOCAL ORDER.** Pursuant to s. 101.02 (7)(b), Stats., any person affected by a local order that is in conflict with an order of the department may petition the department for a hearing on the local order.

(3) **PETITION OF ADMINISTRATIVE RULE.** Pursuant to s. 227.12, Stats., any municipality, corporation or any 5 or more persons having an interest in an administrative rule may petition the department requesting the adoption, amendment or repeal of the rule.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.19 Penalties. Penalties for violations of this chapter shall be assessed in accordance with s. 101.02 (12) and (13)(a), Stats.

Note: Section 101.02 (12), Stats., indicates that every day during which any person, persons, corporation or any officer, agent or employee thereof, fails to observe and comply with an order of the department will constitute a separate and distinct violation of such order.

Note: Section 101.02 (13) (a), Stats., indicates penalties will be assessed against any employer, employee, owner or other person who fails or refuses to perform any duty lawfully enjoined, within the time prescribed by the department, for which no penalty has been specifically provided, or who fails, neglects or refuses to comply with any lawful order made by the department, or any judgment or decree made by any court in connection with ss. 101.01 to 101.25, Stats. For each such violation, failure or refusal, such employee, owner or other person must forfeit and pay into the state treasury a sum not less than \$10 nor more than \$100 for each violation.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.20 Fees. Fees for the plan examination, permit to operate and inspection of anhydrous ammonia systems shall be submitted as specified in ch. Comm 2.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Subchapter IV – Standards

Comm 43.30 Adoption of standards by reference.

(1) **CONSENT.** Pursuant to s. 227.21, Stats., the attorney general and the revisor of statutes have consented to the incorporation by reference of the American National Standard Safety Requirements for the Storage and Handling of Anhydrous Ammonia, ANSI K61.1-1999.

(2) **INCORPORATION.** The American National Standard Safety Requirements for the Storage and Handling of Anhydrous Ammonia, ANSI K61.1-1999, subject to the changes, additions and omissions specified in subch. V, is hereby incorporated by reference into this chapter.

Note: Copies of the ANSI K61.1 standard can be purchased from the American National Standards Institute, Customer Service, 11 West 42nd Street, New York, NY 10036, or from Global Engineering Documents, Customer Support A105, 15 Inverness Way, Englewood, CO 80112, telephone 800/624-3974.

Note: Copies of standards incorporated by reference are on file in the offices of the department, the secretary of state and the revisor of statutes.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.31 Construction and operation. All anhydrous ammonia installations shall be designed, installed, maintained and operated in accordance with the ANSI K61.1 standard incorporated by reference in s. Comm 43.30, subject to the changes, additions and omissions specified in subch. V.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Subchapter V – Changes, Additions or Omissions to Adopted Standards

Comm 43.40 Changes, additions or omissions to ANSI K61.1. Changes or additions to or omissions from the ANSI K61.1 standard are specified in this subchapter and are rules of the department and are not requirements of the ANSI K61.1 standard.

Note: The referenced K61.1 rule number, located in brackets, follows the Comm section number and title and precedes the text of the rule.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.41 Scope and general [K61.1 1.1 and 1.2]. K61.1 Rule 1.1 and Rule 1.2 are not included as part of this chapter.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.42 Definitions [K61.1 Section 2]. (1) ADDITIONS. The following are department definitions in addition to the definitions in K61.1 section 2:

(a) "Secondhand" means having changed location subsequent to the original installation.

(2) **SUBSTITUTIONS.** The following department definitions are substitutions for the respective definitions in K61.1 section 2:

(a) "Authority having jurisdiction" means the department.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.43 Equipment and systems [K61.1 5.1]. This is a department rule in addition to the requirements in K61.1 5.1:

Except for the hydrostatic pressure test requirements, second-hand anhydrous ammonia tanks shall comply with ch. Comm 41, subch. VII.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.44 Pressure relief devices [K61.1 5.8]. (1) FLOW CAPACITY [K61.1 5.8.1]. This is a department rule in addition to the requirements in K61.1 5.8.1:

Pressure relief device flow capacity shall conform to the ASME Code requirements for capacity rating.

(2) **DEVICE REPLACEMENT [K61.1 5.8.16].** This is a department rule in addition to the requirements in K61.1 5.8.16:

In lieu of the expiration date, a relief valve may be used for a total of 5 years if a record is maintained of when it was installed and it was not over 2 years old at the time of installation.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.45 Transfer of liquids [K61.1 5.10]. (1) BREAKAWAY PROTECTION [K61.1 5.10.8.1]. This is a department rule in addition to the requirements in K61.1 5.10.8.1:

All permanent storage installations with systems for filling implements of husbandry or for filling cargo vessels with container capacity of 3500 gallons or less shall have all vapor and liquid risers protected against any break resulting from a pull-away. Each vapor and liquid hose shall have a properly rated excess flow valve, a manual control valve, and a breakaway or shear fitting designed to conform with good engineering practices. For installations existing on November 1, 1999, the breakaway or shear fitting shall be installed by January 1, 2001.

(2) **WORKING PLATFORM.** This is a department rule in addition to the requirements in K61.1 5.10:

Where needed, a platform shall be provided to prevent standing on pieces of equipment while connecting or disconnecting hoses. For installations existing on October 1, 2000, the platform shall be provided by October 1, 2001.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.46 Systems mounted on railcar structures for transportation of ammonia [K61.1 Section 8]. K61.1 section 8 is not included as part of this chapter.

Note: Regulations covering railcar transportation of anhydrous ammonia are contained in U.S. Department of Transportation, Federal Railroad Administration, Title 49 CFR Parts 200 to 299.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

Comm 43.47 Systems mounted on trucks, semi-trailers and trailers for transportation of ammonia [K61.1 Section 9]. K61.1 section 9 is not included as part of this chapter.

Note: Regulations covering highway transportation of anhydrous ammonia are contained in Wisconsin Department of Transportation chs. Trans 305 and 325 to 327.

History: Cr. Register, September, 2000, No. 537, eff. 10-1-00.

