

APPENDIX

The material contained in this appendix is for clarification only. The notes, illustrations, forms, etc., are numbered to correspond to the number of the rule as it appears in the text of the chapter.

A 8.006 Nonadopted Standard

The following standards are not incorporated by reference into this chapter; however, they do contain information which may be of use in answering questions concerning flammable and combustible liquids.

ANSI References

- B31 American National Standard Code for Pressurizing Piping
- B31.3 Petroleum Refinery Piping
- B31.4 Liquid Petroleum Transportation Piping Systems

A.P.I. References

- 620 Recommended Rules for the Design and Construction of Large, Welded, Low pressure Storage Tanks, plus Appendix—Fifth Edition 1973
- 650 Specifications for Welded Steel Tanks for Oil Storage, plus Appendix Fifth Edition—1973
- 2000 Venting Atmospheric and Low Pressure Storage Tanks—1973
- 12B Specifications for Bolted Production Tanks—Eleventh Edition May 1958 and Supplement I, April 1962
- 12D Specifications for Large Welded Production Tanks, Seventh Edition August 1957 and Supplement I, March 1965
- 12F Specifications for Small Welded Production Tanks, Sixth Edition March 1968

ASTM References

- A-395-74 Ferritic Ductile Iron Pressure Retaining Castings for Use at Elevated Temperatures

NFPA References

- 11 Standard for Foam Extinguishing Systems
- 11A Standard for High Expansion Foam Systems
- 12 Standard on Carbon Dioxide Extinguishing Systems
- 12A Standard on Halogenated Fire Extinguishing Agent Systems—Halon 1301
- 13 Standard for the Installation of Sprinkler Systems
- 14 Standard for the Installation of Standpipe and Hose Systems
- 15 Standard for Water Supply Fixed Systems for Fire Protection
- 17 Standard for Dry Chemical Extinguishing Systems
- 24 Standard for Outside Protection
- 27 Recommendations for the Organization, Training and Equipment of Private Fire Brigades
- 33 Standard for Spray Finishing
- 36 Standard for Solvent Extraction Plants
- 49 Hazardous Chemicals Data

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- 51 Standard for the Installation and Operation of Oxygen-Fuel Gas Systems for Welding and Cutting
- 68 Guide for Explosion Venting
- 69 Standard on Explosion Prevention Systems
- 71 Standard for the Installation Maintenance and Use of Central Systems for Guard, Fire Alarm and Supervisory Service
- 72A Standard for the Installation Maintenance and Use of Local Protective Signaling Systems for Watchman, Fire Alarm and Supervisory Service
- 72B Standard for the Installation and Use of Auxiliary Protective Signaling Systems for Fire Alarm Service
- 72C Standard for the Installation Maintenance and Use of Remote Station protective Signaling Systems
- 72D Standard for the Installation Maintenance and Use of Proprietary Protective Signaling Systems for Watchman, Fire Alarm and Supervisory Service
- 73 Standard for the Installation Maintenance and Use of Municipal Fire Alarm Systems
- 77 Recommended Practice on Static Electricity
- 78 Lightning Protection Code
- 86A Standard for Ovens and Furnaces
- 87 Standard for the Construction and Protection of Piers and Wharves
- 90A Standard for the Installation of Air Conditioning and Ventilating Systems
- 91 Standard for the Installation of Blower and Exhaust Systems for Dust, Stock and Vapor Removal or Conveying
- 204 Guide for Smoke and Heat Ventilating
- 231 Indoor General Storage
- 231C Rack Storage of Materials
- 327 Standard Procedures for the Standard for Cleaning or Safeguarding Small Tanks and Containers
- 386 Standard for Portable Shipping Tanks
- 407 Aircraft Fueling Servicing
- 496 Standard for Purged Enclosures for Electrical Equipment in Hazardous Locations
- 505 Standard for Powered Industrial Trucks
- 704 Identification of the Fire Hazards of Materials

Underwriters' Laboratories, Inc. References

Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids, UL 142-1972

Standard for Steel Underground Tanks for Flammable and Combustible Liquids, UL 58-1971

Standard for Steel Inside Tanks for Oil Burner Fuel, UL 80-1974

Register, February, 1982, No. 314

A 8.11 (6) Forms. The following form (SBD-9) is referred to in this section. Copies of this form are available from the Division of Safety and Buildings, P.O. Box 7969, Madison, Wisconsin 53707.

A 8.125 (2) Forms. The following form (SBD-6294) is referred to in this section. Copies of this form are available from the Division of Safety and Buildings, P.O. Box 7969, Madison, Wisconsin 53707.

A 8.14 Forms. The following forms (SB-8 and SB-8A) are referred to in this section. Copies of these forms are available from the Division of Safety and Buildings, P.O. Box 7969, Madison, Wisconsin 53707.

DEPARTMENT OF
INDUSTRY,
LABOR AND
HUMAN RELATIONS

APPLICATION FOR INSTALLATION OF
BULK STORAGE
FLAMMABLE LIQUID/LIQUID PETROLEUM/NATURAL GAS
TANKS

SAFETY & BUILDINGS
DIVISION
P.O. BOX 7999
MADISON, WI 53707

Application is hereby made to the Department of Industry, Labor and Human Relations for Permission to (Install) (Remove) _____ in accordance with the following detailed statement and attached plans subject to the orders of the Department of Industry, Labor and Human Relations. The installation, in all other respects, will comply with applicable provisions of Chapter IND 8 and 9 of the Wisconsin Administrative Code, (FLAMMABLE AND COMBUSTIBLE LIQUIDS/LP GAS CODES).

NOTE: Plans must include (1) location of property lines; (2) buildings; (3) tanks; (4) load and unload racks; (5) streets and highways; (6) streams and other bodies of water with a 150 foot set of tanks. Plans should be drawn in proportion to scale and the scale indicated on the drawings.

TANK LOCATION (STREET):	CITY:	COUNTY:	OWNER:	STREET:	CITY:
NAME OF BULK PLANT OR SERVICE STATION:			STREET:	CITY:	

LIST TANK SPECIFICATIONS:

NO.	TYPE	LENGTH	DIA.	CAPACITY:	CONTENTS
	<input type="checkbox"/> HORIZ <input type="checkbox"/> VERT. <input type="checkbox"/> UNDERGRND				
	<input type="checkbox"/> HORIZ <input type="checkbox"/> VERT. <input type="checkbox"/> UNDERGRND				
	<input type="checkbox"/> HORIZ <input type="checkbox"/> VERT. <input type="checkbox"/> UNDERGRND				

ARE TANKS UNDERWRITER APPROVED? YES NO ARE TANKS NEW? YES NO IF THE ANSWER TO EITHER OF THE TWO PREVIOUS QUESTIONS IS NO STATE GAGE NUMBER OF NOMINAL THICKNESS: _____

VERTICAL TANKS - LIST THICKNESS OF METAL:

BOTTOM	TOP	SHELL-LOWER COURSE	REMAINDER	BOTTOM	TOP	SHELL-LOWER COURSE	REMAINDER
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ABOVE GROUND TANKS - VENTS AND VALVES - SECTION IND 8 21(4) (5) (9)

REGULAR VENT PRESSURE/VACUUM	MAKE	NUMBER:	SIZE:
EMERGENCY RELIEF VENT	MAKE	NUMBER:	SIZE:
EMERGENCY INTERNAL VENT	MAKE	NUMBER:	SIZE:

DESCRIBE SUPPORTS FOUNDATION - SECTION IND 8 20(1) SPECIFY DISTANCE BETWEEN TANKS SECTION IND 8 21(4) (5) (9):

UNDERGROUND TANKS:

DESCRIBE DISTANCE BURIED SECTION IND 8 22(2) SIZE OF FILL PIPE SIZE AND HEIGHT OF VENT: X

IS PUMP/MOTOR EXPLOSION PROOF? YES NO ARE PUMP SWITCHES EXPLOSION PROOF? YES NO ARE BONDS AND GROUNDING PROVIDED AT LOAD UNLOAD RACKS? YES NO

IND 89.10 STORAGE TANKS: FLAMMABLE AND COMBUSTIBLE LIQUIDS, LIQUEFIED PETROLEUM GAS, AND LIQUEFIED NATURAL GAS

(1) A fee shall be assessed and collected for the review and approval of plans according to the following table:

(1)(a) 12-1) 1) STORAGE TANKS, EACH LOCATION

1. FLAMMABLE AND COMBUSTIBLE LIQUIDS

TANK CAPACITY 8,000 - 100,000 GALLONS \$20.00 PER TANK

2. TANK CAPACITY OVER 100,000 GALLONS \$45.00 PER TANK

(1)(b) 2) 1) LIQUEFIED PETROLEUM GAS AND LIQUEFIED NATURAL GAS

(i) \$30.00 PER TANK

(ii) \$15.00 PER TANK

(1)(c) A fee shall be assessed for each tank at bulk plants, since that one or more tanks shall be present at the time the plans are submitted.

APPROVAL	NO.	COST	TOTAL
UNDER 100,000	X	\$20.00	=
OVER 100,000	X	\$45.00	=
LP GAS LN GAS	X	\$30.00	=
REVISION	X	\$15.00	=
INSPECT. FEE	X	\$30.00	=
TOTAL FEE \$			

SIGNATURE	MAILING ADDRESS	DATE	TELEPHONE:
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IND 89.10 SBD 9 (1) 12 80

FIRE DEPARTMENT INSPECTION CHECKLIST FOR
 UNDERGROUND TANK INSTALLATION

DATE _____ NAME _____

ADDRESS _____

A = IN COMPLIANCE B = NOT IN COMPLIANCE

A B

PLAN APPROVAL AND LOCATION

1. Plans have been submitted and approval obtained before installation. (Tanks 5000 gallons or larger individual capacity require approval by state). (Tanks under 5000 gallon capacity require approval by chief of local fire department).
2. Tanks located a minimum of 1 foot from buildings and 3 feet from property line that can be built upon.

TANK CONSTRUCTION

3. Tanks are new and carry UL label. (UL label required for Fiberglass Tanks).
4. Tanks do not have a UL label; owner has certified statement that tanks are constructed in accordance with UL specifications.
5. Tanks are used, but have been tested and certified to be of sound construction. (Certification from Boiler Section).

CORROSION PROTECTION

6. Cathodic protection (anodes) are in place, if required.
7. Steel tanks have been coated for corrosion protection. (Fiberglass tanks do not require corrosion protection).

DEPTH AND COVER

8. Tanks locations, subject to vehicle traffic, will have 3 feet of earth cover or 18 inches of earth plus 6 inches of reinforced concrete or 8 inches of asphalt.
9. Tank location, not subject to vehicle traffic, will have a minimum of 2 feet of earth or 1 foot of earth plus 4 inches of reinforced concrete.

BACK FILL

10. Back fill will be clean sand or pea gravel well tamped in place, 6" around tanks.

SWING JOINTS

11. Swing joints are installed above tank and below dispenser.

VENTING

12. Vents from gasoline storage tanks are located so that the discharge point is at least 12 feet above adjacent ground level. Vents from gasoline tanks shall discharge only upward. Vents shall not terminate under eaves or near a building opening.
13. Vents from fuel oil or diesel fuel storage tanks shall be 3 to 4 feet above adjacent ground level. Elbows or "T" vents may be used.

ANCHORAGE

- 14. No anchorage required.
- 15. Installation is in an area with high water table or area which may be subjected to flooding and tanks are effectively anchored.

TESTING

- 16. Tanks and piping have been tested for tightness and found to be free from any leaks.

COLLECTION SUMPS

- 17. Collection sumps have been properly installed.

COMMENTS:

Signature of Owner or Operator

Mailing address

Signature of Fire Inspector

Fire Department

PETITION FOR MODIFICATION
 OF A RULE IN THE
 WISCONSIN ADMINISTRATIVE CODE

WISCONSIN DEPARTMENT OF
INDUSTRY, LABOR AND HUMAN RELATIONS
 DIVISION OF SAFETY & BUILDINGS
 P.O. BOX 7969, MADISON, WI 53707

Name of Owner	Building Occupancy or Use	Agent, Architect or Engineering Firm
Company	Tenant Name, if any	Street & No.
Street & No.	Building Location, Street & No.	City State & Zip
City State & Zip	City County	Phone

1. Rule Ind. _____ of the Wisconsin Administrative code cannot be entirely satisfied because:

2. In lieu of complying exactly with the rule, the following alternative is proposed as a means of providing an equivalent degree of safety:

3. Supporting arguments are:

Verification by owner

_____, being duly sworn, says he is the petitioner herein, thus he has read the foregoing petition and that the same is true, as he verily believes.

 signature of owner

subscribed and sworn to me this ____ day of _____, 19____, in _____ County, Wisconsin.

 Notary Public

My commission expires: _____

Notary Seal - Action	
Secretary	Date

-PETITION IS VALID ONLY IF NOTARIZED
 Petition Fee: \$200.00, see Ind. 69.09(7), 1980 code

POSITION STATEMENT:
To be completed by
Chief of Fire Department
SB 8-A (1-77)

WISCONSIN DEPARTMENT OF
INDUSTRY, LABOR AND HUMAN RELATIONS
DIVISION OF SAFETY & BUILDINGS
P.O. BOX 7989 MADISON WI 53707

Name of Owner		Building Occupancy or Use		Agent, Architect or Engineering Firm	
Company		Tenant Name, if any		Street & No.	
Street & No.		Building Location, Street & No.		City	State & Zip
City	State & Zip	City	County	Phone	
1. I have read the petition for modification of rule: Ind					
2. I recommend (Check appropriate box)		Denial	Approval	Conditional Approval	No Comment*
3. Explanation for Recommendation:					
* If desired, Fire Departments may indicate "No Comment" on non-fire safety issues such as sanitary, energy conservation, structural, barrier free environments, etc.					
4. <input type="checkbox"/> I find no conflict with local rules and regulations					
<input type="checkbox"/> I find that the petition is in conflict with local rules and regulations					
Explanation					
Signature of Fire Chief				Date	

PLEASE COMPLETE AND SUBMIT PROMPTLY TO DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS AT THE ADDRESS SHOWN ABOVE.

SAMPLE
FORMAT

STATE OF WISCONSIN/DILHR/FIRE PREVENTION SECTION

SAMPLE
FORMAT

PROGRAM CHECK LIST

In regards to training of persons who will operate the key, card or code dispensing devices in accordance with Chapter Ind 8 of the Flammable and Combustible Liquids Code - Ind 8.11 (4) (h) 1.

CARDTROL OPERATING INSTRUCTIONS

1. Turn off engine and extinguish all smoking materials.
2. Insert key, card or code into reader unit.
3. When "Select Pump" light comes on push button to select desired pump.
4. Remove key or card from reader. You now have 90 seconds to start fueling before unit "times out".
5. Remove nozzle from selected pump and turn lever on.
6. After fueling turn pump lever off and replace nozzle on pump.

SAFETY INSTRUCTIONS AGREEMENT

1. Always turn off engine before fueling.
2. Never smoke or use open flame devices in vicinity of pumps.
3. Never dispense gasoline into a glass container. Use only red metal containers or UL listed or classified containers for gasoline.
4. Never dispense diesel fuel into a red container.
5. Familiarize yourself with the locations of the fire extinguisher and emergency electrical cutoff switch.
6. To use fire extinguisher, break glass to gain access.
7. Follow instructions on the use of the fire extinguisher.
8. To disconnect electric power to pumps, break glass and pull switch on emergency shutoff located on the building.
9. The emergency telephone number is conspicuously posted at the site and customer agrees to call this number in case of a spill or if any other hazardous condition is found to exist.

AGREEMENTS: {special provisions between owner and member}

RESPONSIBILITY OF CUSTOMER: {use, payment, key-card control, etc.}

I certify that I received the instructions and training necessary for operation of _____
key, card or code dispensing unit.

Customers signature _____ date _____

Company representative signature _____ date _____