Minn. R. 4720.3965

THIS DOCUMENT REFLECTS CHANGES RECEIVED THROUGH FEBRUARY 4, 2015

4720.3965 DISINFECTION.

Subpart 1.**CHLORINE.** Chlorine must be the principal agent used to disinfect the water supply. Other agents may be approved by the commissioner on a case-by-case basis provided reliable feeding equipment is available and testing procedures for a residual are recognized in the 16th edition of Standard Methods for the Examination of Water and Wastewater (1985). This edition is incorporated by reference, is not subject to frequent change, and is available through the Minitex interlibrary loan system.

Subp.

2. EQUIPMENT. A gas chlorinator or a positive displacement hypochlorite feeder must be provided by the supplier.

Subp.

3. CAPACITY. The chlorinator capacity must provide that a free chlorine residual of at least two mg/1 is attained in the water after a contact time of at least 30 minutes when maximum flow rates coincide with anticipated maximum chlorine demands. The equipment must be designed to operate accurately over the desired feed range.

Subp.

4. STANDBY EQUIPMENT. Where chlorination is needed to protect the water supply, standby equipment of sufficient capacity must be available to replace the largest unit during shutdowns.

Subp.

5. AUTOMATIC PROPORTIONING. Automatic proportioning chlorinators are required where the rate of flow is not reasonably constant or where the rate of flow of the water is not manually controlled.

Subp.

6. CONTACT TIME AND POINT OF APPLICATION. To determine the contact time of the chlorine in water, ammonia, taste-producing substances, temperature, bacterial quality, trihalomethane formation potential and other pertinent factors must be considered. All basins used for disinfection must be designed to minimize short circuiting.

A. At plants treating surface water, provisions must be made for applying chlorine to the raw water, settled water, filtered water, and water entering the distribution system. The contact time required in item B must be provided after filtration.

B. Surface water supplies using free residual chlorination must provide a minimum contact time of two hours. When combined residual chlorination is used for surface water supplies, a minimum of three hours contact time must be provided.

Subp.

7. RESIDUAL TESTING EQUIPMENT. Residual testing equipment must measure residuals to the nearest 0.1 mg/1 in the range below 0.5 mg/1 and to the nearest 0.2 mg/1 between 0.5 mg/1 to 2.0 mg/1.

Subp.

8. CHLORINATOR PIPING. The water supply piping must be designed to prevent contamination of the treated water supply by water sources of impure or unknown quality.

Subp.

9. HOUSING. Chlorine gas feed and storage must be:

A. separated from other operating areas by gas-tight enclosures to prevent injury to personnel and damage to equipment;

B. provided with an inspection window installed in an interior wall or exterior door to permit viewing of the interior of the room and the equipment;

C. provided with doors having emergency or panic hardware and opening outward to the building exterior;

D. heated to prevent freezing and insure proper operation of the equipment;

E. provided with restraints to prevent movement of the chlorine cylinders; and

F. designed so the ejector for mixing chlorine gas and water is located in the chlorine room where chlorine gas under pressure is used.

Subp.

10. VENTILATION OF CHLORINE ROOMS. One complete air change a minute must be provided when the chlorine room is occupied. In addition:

A. the exhaust fan suction must be near the floor with the point of discharge located to avoid contamination of air inlets to other rooms and structures or blockage by snow or other obstructions;

B. air inlets must be located near the ceiling and controlled to prevent adverse temperature variation;

C. the exhaust fan switch must be located at the entrance to the chlorine room with a signal light indicating fan operation when the fan is controlled from more than one point; and

D. vents from feeder and storage units must discharge to the outside atmosphere, above grade as indicated in item A.

Subp.

11. AMMONIATION. Housing and ventilation for ammoniation must be provided as specified in subparts 9 and 10. Ammonia storage and feed facilities must be separate from chlorine facilities because of the combustion hazard. A plastic bottle of hydrochloric acid must be available and used for leak detection.

Statutory Authority

Statutory Authority: *MS § 144.383*

History

History:
15 SR 1842

MINNESOTA ADMINISTRATIVE CODE

Minn. R. 4720.0450

THIS DOCUMENT REFLECTS CHANGES RECEIVED THROUGH FEBRUARY 4, 2015

Minnesota Rules Administrative Code > ***CHAPTER 4720 PUBLIC WATER* SUPPLIES**

4720.0450 DEFINITIONS; SECTION 141.2 OF THE NATIONAL PRIMARY ***DRINKING WATER*** REGULATIONS.

Subpart 1.[Renumbered subp. 1b]

Subp.

1a. CAPACITY DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Capacity" means the overall capability of a public ***water*** system to reliably produce and deliver ***water*** meeting all national primary ***drinking water*** regulations in effect, or likely to be in effect, on the date of commencement of operation. Capacity encompasses the technical, managerial, and financial capabilities that enable the ***water*** system to plan for, achieve, and maintain compliance with ***drinking water*** standards found in *Code of Federal Regulations, title 40, section 141*.

Subp.

1b. CENTRAL *WATER* TREATMENT DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Central ***water*** treatment" means providing treatment at a common location or facility and subsequently delivering it to the consumer of the public ***water*** supply.

Subp.

2. COMMISSIONER OF HEALTH DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Commissioner of health" means the authority established by *Minnesota Statutes, sections 144.381* to *144.387*, for enforcement in the state of the National Primary ***Drinking Water*** Regulations and parts 4720.0200 to 4720.3970. For purposes of enforcing the National Primary ***Drinking Water*** Regulations, title 40, part 141, the term "state" contained in those regulations means the commissioner of health.

Subp.

3. COMPOSITE DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Composite" means a sampling technique in which two or more samples are combined before an analysis is performed.

Subp.

4. DISTRIBUTION SYSTEM DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Distribution system" means a network of pipes,

valves, storage reservoirs, and pumping stations that delivers ***water*** to homes, businesses, and industries for ***drinking*** and other uses.

Subp.

5. ENTRY POINT SAMPLES DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Entry point samples" means ***water*** samples collected at a location after any application of treatment but before the ***water*** is delivered to any consumer.

Subp.

6. ENVIRONMENTAL PROTECTION AGENCY METHODS DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Environmental Protection Agency methods" means methods contained in Methods for the Determination of Organic Compounds in Finished ***Drinking Water*** and Raw Source ***Water***, September 1986. These methods are issued by the Environmental Monitoring and Support Laboratory (EMSL) of the United States Environmental Protection Agency, Cincinnati, Ohio 45268. These methods are incorporated by reference and are not subject to frequent change. The methods are available through the Minitex interlibrary loan system.

Subp.

7. FEDERAL *ACT* DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Federal ***act***" means the ***Safe Drinking Water Act*** of 1974, Public Law 93-523, *title 42, United States Code, section 300f* to *300j-11*.

Subp.

8. FEDERAL REGULATIONS DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Federal regulations" means regulations dealing with public ***water*** supplies and ***drinking water*** quality, adopted by the Administrator of the United States Environmental Protection Agency pursuant to the federal ***act***.

Subp.

8a. FINANCIAL CAPACITY DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Financial capacity" means a public ***water*** system's ability to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with ***drinking water*** standards found in *Code of Federal Regulations, title 40, section 141*.

Subp.

9. GROUNDWATER DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Groundwater" means the ***water*** in the zone of saturation in which all of the pore spaces of the subsurface material are filled with ***water***. The ***water*** that supplies a well is groundwater.

Subp.

9a. MANAGERIAL CAPACITY DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:"Managerial capacity" means a public ***water*** system's institutional and administrative capabilities to allow the system to achieve and maintain compliance with ***drinking water*** standards found in *Code of Federal Regulations, title 40, section 141*.

Subp.

9b. NEW *WATER* SYSTEM DEFINED. In section 141.2 of the National Primary ***Drinking Water*** Regulations, the following definition is added:For purposes of capacity development, "new ***water*** system" means a community ***water*** system (CWS) or nontransient noncommunity ***water*** system (NTNCWS) in which either there was no previously existing physical ***water*** system or the existing ***water*** system has undergone an infrastructure expansion that causes the system to satisfy the criteria for a CWS or NTNCWS as defined in *Code of Federal Regulations, title 40, section 141*.

Subp.

9c. TECHNICAL CAPACITY DEFINED. In section 141.2 of the National Primary ***Drinking*** ***Water*** Regulations, the following definition is added:"Technical capacity" means a public ***water*** system's physical and operational capabilities to allow the system to achieve and maintain compliance with ***drinking*** ***water*** standards found in *Code of Federal Regulations, title 40, section 141*.

Subp.

10. TURBIDITY UNIT DEFINED. In section 141.2 of the National Primary ***Drinking*** ***Water*** Regulations, the following definition is added:"Turbidity unit" means an amount of turbidity equivalent to that in a solution composed of 0.000125 percent hydrazine sulfate and 0.00125 percent hexamethylenetetramine in distilled and filtered (100 ? pore size membrane) ***water***, as measured by a nephelometric turbidimeter.

Subp.

11. YEAR-ROUND RESIDENT DEFINED. In section 141.2 of the National Primary ***Drinking*** ***Water*** Regulations, the following definition is added:"Year-round resident" means a person who resides in the area served by the public ***water*** supply for more than six months of the year.

Statutory Authority

Statutory Authority:*MS § 144.383*

History

History:
15 SR 1842; 18 SR 1960; 24 SR 301

MINNESOTA ADMINISTRATIVE CODE