Department of Health

Environmental Health Division

Adopted Rules Governing Registration of Engineers and Construction of Monitoring Wells

Rules as Adopted

7 MCAR S 1.210 Definitions and policies.

A.-B. [Unchanged.]

C. The following terms apply to the water well construction code, 7 MCAR SS 1.217-1.230.

1.-7. [Unchanged.]

8. "Confining bed" means a layer or body of soil, sediment, or rock with low vertical permeability relative to the aquifers or beds above or below it.

8.-13. [Renumber as 9.-14.]

15. "Monitoring well" means any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed for the purpose of extracting groundwater for physical, chemical, or biological testing. "Monitoring well" includes "groundwater quality sampling well" as that phrase is used in Minnesota Statutes, section 156A.03, subdivision 3.

14.-37. [Renumber as 16.-39.]

D. [Unchanged.]

Rules as Adopted

7 MCAR S 1.212 Registration of engineers who drill monitoring wells.

A. Original registration. A professional engineer who is registered with the Board of Architecture, Engineering, Land Surveying, and Landscape Architecture as a civil or geological engineer, and who seeks to drill monitoring wells, shall register annually on a form provided by the commissioner. The completed form must be returned to the commissioner, along with the $50 registration fee. The registrant shall register each

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calendar year, and the registration expires on December 31.

B. Renewal. Each registrant shall submit an application for registration renewal on a form provided by the commissioner no later than December 31 of the year preceding the year for which the application is made. The registration renewal application must be accompanied by a fee of $50. A penalty fee of $10 must be paid in addition to the $50 renewal fee if the renewal is submitted after the December 31 deadline.

C. Drilling monitoring wells. An engineer may not drill monitoring wells unless he is currently registered with the commissioner.

7 MCAR S 1.216 Monitoring wells.

A. Use of well. A monitoring well may not be used as a source of water for human consumption, or for any industrial or agricultural use, or for any public or private water supply. A monitoring well may not be used for any purpose other than groundwater quality testing and monitoring.

B. Installation of well. A monitoring well may only be installed by a water well contractor licensed under 7 MCAR S 1.211 or a professional engineer who is registered under 7 MCAR S 1.212.

C. Applicability of code. Unless otherwise provided in this rule, all provisions of the water well construction code, 7 MCAR SS 1.210-1.224, apply to the construction and abandonment of a monitoring well.

D. Special provisions and exceptions to code.

1. A monitoring well may not interconnect aquifers which are separated by a confining bed. If a confining bed is penetrated below the aquifer to be monitored, the drillhole through the confining bed must be filled with neat cement grout from the bottom of the drillhole to the top of the confining bed.

2. A monitoring well may be constructed into the first aquifer nearest to the ground surface without prior approval by the Department of Health.

Before a monitoring well which is constructed for the purpose of investigating potential, existing, or future

groundwater contamination may be drilled into any aquifer which is below the first aquifer nearest to the ground surface, plans, specifications, and construction features of the proposed installation must be submitted to and approved by the administrative authority.

3. Only a monitoring well which is constructed for the purpose of investigating potential, existing, or future groundwater contamination is exempt from the provisions in 7 MCAR S 1.217 C. relating to isolation distances from sources of contamination.

4. A monitoring well must be constructed using materials meeting the standards prescribed in 7 MCAR SS 1.220 A. and 1.224. In addition, a monitoring well may be constructed using schedule 5 stainless steel pipe which meets the standards of ASTM A 312-81a (American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103).

5. A person constructing a monitoring well need not meet the yield test requirement imposed in 7 MCAR S 1.220 L. However, the person constructing the well shall submit the results of any yield tests which may be performed along with the well log.

6. For monitoring wells where the use of chlorine disinfectants will interfere with the intended water quality analyses, alternate disinfection methods or materials may be used if they are approved by the commissioner.

7. A monitoring well is exempt from the venting requirement in 7 MCAR S 1.222 G.

8. The inside casing diameter for a monitoring well must be at least 1-1/2 inches, except that a driven well point may be equipped with a casing at least 1-1/4 inch in diameter.

E. Protective measures.

1. Every monitoring well must be closed by use of an overlapping, locked metal cap or a wrench-tightened, threaded metal cap. The metal cap must be equivalent to the casing in strength and weight.

2. A monitoring well must be protected from damage by

whichever of the methods in a.-c. is most appropriate for the existing and anticipated site conditions.

a. Protection may be by the placement of three posts of at least four-inch diameter, around the well at equal distances from each other and two feet from the casing. The posts must extend four feet above the ground surface and must be installed to a depth of four feet into solid ground or to a depth of two feet if each post is surrounded with six inches of concrete to a depth of two feet. The posts may be made of any of the following materals:

i. schedule 40 steel pipe, if capped with an overlapping, threaded, or welded steel or iron cap, or filled with concrete;

ii. reinforced concrete; or

iii. preservative treated wood.

b. Protection may be by surrounding the casing with a concrete slab which has horizontal dimensions of four feet by four feet, which rises 12 inches vertically above grade at the outer edge, and whose surface is sloped away from the well casing.

c. If a monitoring well is to be protected by means other than those prescribed in a. and b., the licensee or engineer shall first obtain written approval for the other means from the administrative authority. The alternate method must assure a degree of protection at least equal to that provided by the methods in a. or b.

3. A monitoring well need not be protected according to the procedures in 2. if the well is routinely inspected at least weekly and if the well is located in an area where it is not likely to be damaged by vandals or by impact from heavy equipment, cars, snowmobiles, or similar vehicles.

4. In addition to the measures prescribed in 2., a monitoring well which is cased with plastic must be protected within a watertight schedule 40 steel casing which is embedded in cement or concrete to a depth of two feet. The steel casing must be covered with an overlapping, locking steel cap. The

inner casing must be capped or protected with an overlapping, threaded cap.

5. If a monitoring well is damaged, the damage must be corrected within 72 hours of its discovery. If a monitoring well is damaged irreparably, it must be properly sealed and abandoned in accordance with 7 MCAR S 1.218 C. within seven days of discovery of the damage.

Repealer. Rules 7 MCAR SS 1.217 C.4., and 1.218 D. are repealed.