

Minnesota Attorney General: Administrative Rules Proceedings

Copyright Notice:

This material may be protected by copyright law (U.S. Code, Title 17). Researchers are liable for any infringement. For more information, visit www.mnhs.org/copyright.

Version 3
August 20, 2018

Our File No. 401

RULE REVIEW CHECKLIST

DATE RULE RECEIVED 11-22-83
DATE FOR REVIEW 12-1-83
DATE DUE 12-6-83

Adopted w/a hearing _____
Adopted w/o hearing ✓
Temporary rule _____

Approved 12-6-83 Disapproved _____ Returned to Agency _____

Resubmitted _____ Due _____
Approved _____ Disapproved _____ Returned to Agency _____

Date filed w/Secretary of State _____ Revisor approved _____ disapproved _____

✓ Rule as Adopted

_____ Rule as Proposed

✓ Order Adopting 11.2.83 Date

✓ Notice of Intent to Solicit Outside Opinion SR. 6/8/81

✓ Order for rulemaking
N/A date of Hearing

N/A Certificate of Board's Authorizing Resolution

✓ Notice of rulemaking
✓ Sufficiency

✓ Affidavit of Mailing Notice or rulemaking
5.13.83 At least 30 days prior to ~~hearing~~/adoption

✓ Mailing list Certificate

✓ Publication in State Register
5.16.83 At least 30/~~20~~ days prior to ~~hearing~~/adoption

N/A Hearing Examiner's Report

✓ Chief Hearing Examiner's Report(s)
_____ Approving H.E.'s Report
_____ Approving agency action

✓ Agency's Findings of Fact

✓ LCRAR Report or agency Affidavit

✓ Certificate of Board's Resolution Adopting Rules

_____ Order Approving Incorporation by Reference

✓ Statement of Need and Reasonableness

N/A Petition for Adoption of a Rule

✓ Record (includes transcript or tape, exhibits, ~~before notice was publish~~ comments received by agency, requests for a hearing, and other relevant materials)

✓ Certificate of Compliance w/Rulemaking Procedures

N/A Affidavit of Mailing Notice of Submission to Attorney General

✓ Notice of Submission to the Attorney General

✓ Approval of Fees by ~~Dept.~~ of Finance.

SF-00006-02

STATE OF MINNESOTA

DEPARTMENT ATTORNEY GENERAL - Health

Office Memorandum

TO : Office of Attorney General
Administration Division

DATE: November 22, 1983

FROM : Paul G. Zerby
Special Assistant
Attorney General

PHONE: 341-7272

SUBJECT: Noncontroversial Amendments to Rules Relating to Registration of Engineers and Construction of Monitoring Wells (7 MCAR § 1.210 - 1.225)

Pursuant to 1 MCAR § 1.203 I submit to the Attorney General the original and copies as noted of the following documents:

A. Rule as Adopted - original and 3 copies (showing no changes from version published in State Register)

B. Order Adopting - 2 copies

C. Not applicable

D. Notice of Intent to Solicit Outside Opinion - No comments were received in response to the notice

E. Order for Notice of Intent to Adopt Rules Without a Hearing

F. Not applicable

G. Notice of Intent to Adopt Rules Without a Public Hearing

H. Affidavit of Mailing of Notice of Intent to Adopt a Rule Without a Public Hearing

I. Mailing List Certificate

J. Rule as Proposed (and published in State Register)

K. Findings of Fact and Conclusions

L. Statement of Need and Reasonableness

M. Not applicable

N. Written comments received in response to notice (5 comments)

O. Certificate of Compliance with Rulemaking Procedures.

P. Not applicable (no one requested to be notified of submission to Attorney General)

In addition to the above, I enclose Department of Finance Approval for Registration of Engineers Who Drill Monitoring Wells.

If you have any questions regarding the enclosed, please advise. Your prompt attention to this would be appreciated.

PGZ:jp

Enclosures

cc: Pauline Bouchard

SF-00006-02

STATE OF MINNESOTA

DEPARTMENT ATTORNEY GENERAL

Office Memorandum

TO : Sr. Mary Madonna Ashton, Commissioner DATE: 12/6/83

Attn: PAUL ZERBY, Special Assistant Attorney General

FROM : MARTHA J. CASSERLY PHONE: 296-4692
Special Assistant Attorney General
MJC

SUBJECT: In the Matter of the Proposed Adoption of the State Department of Health Governing Registration of Engineers and Construction of Monitoring Wells.

Enclosed herewith are the rules you have submitted for approval. These rules have been approved by this office and filed with the Secretary of State. Please note that they have not been filed with the State Register. This must be done promptly by your agency.

Upon receipt and before transmittal to your agency, however, it is important that you recheck these rules as to:

1. Affixation of stamps of the Attorney General and Secretary of State;

2. Coverage by these stamps of all rules submitted; and

3. Inclusion of all pages to the rules in the approved set.

If you have any questions in this regard, please contact me.

Encs.
MJC/ls
cc: Ms. Kathy Burek
Mr. Duane Harves

Orig.

A

AG copy

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

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.

what is basis of approval?

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.

STATE OF MINNESOTA
DEPARTMENT OF STATE
FILED
DEC 7 1983
Joan Anderson Growe
Secretary of State

10:39AM

APPROVED AS TO FORM AND LEGALITY
December 6 1983
HUBERT H. HUMPHREY, III
ATTORNEY GENERAL
BY Martha J Cassedy
SPECIAL ASSISTANT ATTORNEY GENERAL

B

STATE OF MINNESOTA

DEPARTMENT OF HEALTH

In the Matter of the Proposed Adoption of the State Department of Health Governing Registration of Engineers and Construction of Monitoring Wells

ORDER ADOPTING RULES

Notice of the Commissioner's intent to adopt the above-entitled rules without a public hearing was published in the State Register on May 16, 1983 and was sent by United States mail to all persons on the list maintained by the agency pursuant to Minnesota Statutes section 14.22 subdivision 4 on May 13, 1983. After affording interested and affected persons an opportunity to submit comments for 30 days after Notice, receiving fewer than seven written requests for a public hearing within the 30-day comment period, reviewing and considering the comments, and determining the need for and reasonableness of the above-captioned rules.

NOW, THEREFORE, IT IS ORDERED that these rules identified as 7 MCAR § 1.210 C and § 1.212 are adopted this 2nd day of November 1983 pursuant to authority vested in me by Minnesota Statutes section 156A.03 subdivision 3 and section 156A subdivision 2 (1982).

STATE OF MINNESOTA

Valentine O'Malley for.

COMMISSIONER OF HEALTH
Sister Mary Madonna Ashton

Department of Health
Environmental Health Division

Notice of Intent to Solicit Outside Opinion on Rules Relating to Public Water Supplies, Swimming Pools, Water Conditioning Contractors' Bond, Children's Camps, Migrant Labor Camps, Formaldehyde, Registration of Engineers, Monitoring Wells and Groundwater Thermal Exchange Devices

Notice is hereby given, pursuant to the provisions of Minn. Stat. § 15.0412, subd. 6 (1980) that the Commissioner of Health is considering the proposal of amendments to existing rules and adoption of new rules relating to the subject matters listed below.

All interested or affected persons may submit information on these subjects. All statements of information and comment received will be introduced into the record of any rules' promulgation proceedings held relating to these subjects. Written comments regarding any of the subjects listed should be addressed to the appropriate persons named below.

Public Water Supplies: considering amendments to 7 MCAR §§ 1.141-1.145 to incorporate recent Federal safe drinking water standards.

Swimming Pools: considering amendments to 7 MCAR § 1.141.

Water Conditioning Contractors: considering amendments to 7 MCAR § 1.135 prescribing the amount of the bond to be filed with the State pursuant to Minn. Stat. § 326.601 (1980).

For comments regarding public water supplies, swimming pools or the water conditioners' bond, contact:

Richard D. Clark
Section of Water Supply and General Engineering
Minnesota Department of Health
717 S.E. Delaware Street
Minneapolis, Minnesota 55440

Children's Camps: considering amendments to 7 MCAR § 1.201 regarding the requirement for a physical examination prior to attendance.

Migrant Labor Camps: considering amendments to 7 MCAR § 1.204 regarding inspections and permits.

For comments regarding children's camps and migrant labor camps, contact:

Charles B. Schneider, Chief
Section of Environmental Field Services
Minnesota Department of Health
717 S.E. Delaware Street
Minneapolis, Minnesota 55440

Formaldehyde: considering proposal of a new rule setting a maximum permissible ambient level for formaldehyde in newly constructed residential units, contact:

Laura Oatman
Section of Health Risk Assessment
Minnesota Department of Health
717 S.E. Delaware Street
Minneapolis, Minnesota 55440

Registration of Civil Engineers: considering adoption of a new rule for engineers who drill monitoring wells.

Monitoring Wells and Groundwater Thermal Exchange Devices: considering amendments to the water well construction code, 7 MCAR §§ 1.210-1.225.

For comments regarding registration of civil engineers, monitoring wells and groundwater thermal exchange devices, contact:

Edwin Ross
Section of Water Supply and General Engineering
Minnesota Department of Health
717 S.E. Delaware Street
Minneapolis, Minnesota 55440

E

STATE OF MINNESOTA
DEPARTMENT OF HEALTH

In the Matter of the Proposed Adoption of Amendments to Rules Relating to Registration of Engineers and Construction of Monitoring Wells	ORDER FOR NOTICE OF INTENT TO ADOPT RULES WITHOUT PUBLIC HEARING

IT IS ORDERED this 7th day of April, 1983 that Notice of Intent to Adopt Rules Without Public Hearing in the above-entitled matter be given to all persons who have registered their names with the Minnesota Department of Health for that purpose and be published in the State Register.

STATE OF MINNESOTA

Sr. Mary Madonna Ashton

Sister Mary Madonna Ashton
Commissioner of Health

Department of Health

Environmental Health Division

In the Matter of the Proposed Adoption of Rules of the State Department of Health Governing Registration of Engineers and Construction of Monitoring Wells.

Notice of Intent to Adopt Rules Without a Public Hearing

Notice is hereby given that the Commissioner of Health proposes to adopt the above-entitled rules without a public hearing. The Commissioner has determined that the proposed adoption of these rules will be noncontroversial in nature and has elected to follow the procedures set forth in Minnesota Statutes, Sections 14.21 to 14.28.

Persons interested in these rules shall have until 30 days after publication in the State Register to submit comments on the proposed rules. The proposed rules may be modified if the modifications are supported by the data and views submitted to the agency and do not result in a substantial change in the proposed language.

Unless seven or more persons submit written requests for a public hearing on the proposed rules within the comment period, a public hearing will not be held. In the event a public hearing is required, the agency will proceed according to the provisions of Minnesota Statutes, Sections 14.13 to 14.20.

Persons who wish to submit comments or a written request for a public hearing should submit such comments or request to:

Mr. Ronald D. Thompson, Unit Leader
Ground Water Quality Control Unit
Minnesota Department of Health
Division of Environmental Health
717 Delaware Street S.E.
Minneapolis, Minnesota 55440
612/623-5556

Authority for the adoption of these rules is contained in Minnesota Statutes, Section 156A.03. Additionally, a Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rules and identifies the data and information relied upon to support the proposed rules has been prepared and is available from Mr. Thompson upon request.

Upon adoption of the final rules without a public hearing, the proposed rules, this Notice, the Statement of Need and Reasonableness, all written comments received, and the final Rules as Adopted will be delivered to the Attorney General for review as to form and legality, including the issue of substantial change. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the final rules as proposed for adoption, should submit a written statement of such request to Mr. Thompson.

The proposed rules follow this Notice. Copies of this Notice and the proposed rules are available and may be obtained by contacting Mr. Thompson.

State of Minnesota

Sr. Mary Madonna Ashton

Sister Mary Madonna Ashton
Commissioner of Health

H.

In the Matter of Proposed
Adoption of Amendments to
Rules Relating to Registration
of Engineers and Construction
of Monitoring Wells

STATE OF MINNESOTA)
) ss. **AFFIDAVIT OF**
COUNTY OF HENNEPIN) **MAILING**

Romaine Cohen, being first duly sworn, deposes and says:

That on the 13th day of May, 1983, at the City of Minneapolis, County of Hennepin, State of Minnesota, she served the attached Notice of Intent to Adopt Rules Without Public Hearing by depositing in the United States mail at said City of Minneapolis, a copy thereof, properly enveloped, with postage prepaid, on all persons and associations who have requested that their names be placed on file with the State Department of Health for the purpose of receiving notice of the proposed adoption of rules by this Department.

Romaine Jean Cohen

Subscribed and sworn to before me
this 26 day of Aug, 1983.

Louise K. Kanuk

LOUISE K. KANUK
NOTARY PUBLIC-MINNESOTA
HENNEPIN COUNTY
My Comm. Expires Feb. 22, 1984

I.

STATE OF MINNESOTA

COUNTY OF HENNEPIN

CERTIFICATE

In the Matter of the Proposed
Adoption of Amendments to Rules
Relating to Registration of
Engineers and Construction of
Monitoring Wells

I hereby certify that the list of persons, associations, and other interested groups who have requested, pursuant to Minn. Stat. § 15.0412, subd. 4, that their names be placed on file with and maintained by the State Department of Health for the purpose of receiving notice of the proposed adoption of rules by this Department is accurate and complete as of 11:00 a.m., this 13th day of May, 1983.

Lora L. Erickson

PROPOSED RULES

Pursuant to Minn. Stat. of 1980, §§ 14.21, an agency may propose to adopt, amend, suspend or repeal rules without first holding a public hearing, as long as the agency determines that the rules will be noncontroversial in nature. The agency must first publish a notice of intent to adopt rules without a public hearing, together with the proposed rules, in the *State Register*. The notice must advise the public:

1. that they have 30 days in which to submit comment on the proposed rules;
2. that no public hearing will be held unless seven or more persons make a written request for a hearing within the 30-day comment period;
3. of the manner in which persons shall request a hearing on the proposed rules;

and

4. that the rule may be modified if modifications are supported by the data and views submitted.

If, during the 30-day comment period, seven or more persons submit to the agency a written request for a hearing of the proposed rules, the agency must proceed under the provisions of §§ 14.13-14.20 which state that if an agency decides to hold a public hearing, it must publish in the *State Register* a notice of its intent to do so. This notice must appear at least 30 days prior to the date set for the hearing, along with the full text of the proposed rules. (If the agency has followed the provisions of subd. 4h and has already published the proposed rules, a citation to the prior publication may be substituted for republication.)

Pursuant to Minn. Stat. § 14.29, when a statute, federal law or court order to adopt, suspend or repeal a rule does not allow time for the usual rulemaking process, temporary rules may be proposed. Proposed temporary rules are published in the *State Register*, and for at least 20 days thereafter, interested persons may submit data and views in writing to the proposing agency.

Department of Health
Environmental Health Division

Proposed Rules Governing Registration of Engineers and Construction of Monitoring Wells

Notice of Intent to Adopt Rules without a Public Hearing

Notice is hereby given that the Commissioner of Health proposes to adopt the above-entitled rules without a public hearing. The commissioner has determined that the proposed adoption of these rules will be noncontroversial in nature and has elected to follow the procedures set forth in Minnesota Statutes, Sections 14.21 to 14.28.

Persons interested in these rules shall have until 30 days after publication in the *State Register* to submit comments on the proposed rules. The proposed rules may be modified if the modifications are supported by the data and views submitted to the agency and do not result in a substantial change in the proposed language.

Unless seven or more persons submit written requests for a public hearing on the proposed rules within the comment period, a public hearing will not be held. In the event a public hearing is required, the agency will proceed according to the provisions of Minnesota Statutes, Sections 14.13 to 14.20.

Persons who wish to submit comments or a written request for a public hearing should submit such comments or request to:

Mr. Ronald D. Thompson, Unit Leader
Ground Water Quality Control Unit
Minnesota Department of Health
Division of Environmental Health
717 Delaware Street S.E.
Minneapolis, Minnesota 55440
612/623-5556

Authority for the adoption of these rules is contained in Minnesota Statutes, Section 156A.03. Additionally, a statement of need and reasonableness that describes the need for and reasonableness of each provision of the proposed rules and identifies the data and information relied upon to support the proposed rules has been prepared and is available from Mr. Thompson upon request.

Upon adoption of the final rules without a public hearing, the proposed rules, this notice, the statement of need and reasonableness, all written comments received, and the final rules as adopted will be delivered to the Attorney General for review as to form and legality, including the issue of substantial change. Persons who wish to be advised of the submission of

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

this material to the Attorney General, or who wish to receive a copy of the final rules as proposed for adoption, should submit a written statement of such request to Mr. Thompson.

The proposed rules follow this notice. Copies of this notice and the proposed rules are available and may be obtained by contacting Mr. Thompson.

Sister Mary Madonna Ashton
Commissioner of Health

Rules as Proposed

7 MCAR § 1.210 Definitions and policies.

A.-B. [Unchanged.]

C. The following terms apply to the water well construction code, 7 MCAR §§ 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 Proposed (all new material)

7 MCAR § 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 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 § 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 § 1.211 or a professional engineer who is registered under 7 MCAR § 1.212.

C. Applicability of code. Unless otherwise provided in this rule, all provisions of the water well construction code, 7 MCAR §§ 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 is exempt from the provisions in 7 MCAR § 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 §§ 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 yeild test requirement imposed in 7 MCAR § 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 § 1.222 G.

8. The inside casing diameter for a monitoring well must be at least 1½ inches, except that a driven well point may be equipped with a casing at least 1¼ 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 materials:

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 § 1.218 C. within seven days of discovery of the damage.

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

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

STATE OF MINNESOTA

DEPARTMENT OF HEALTH

In the Matter of the Proposed
Adoption of the State Department
Of Health Governing Registration
of Engineers and Construction of
Monitoring Wells

FINDINGS AND CONCLUSIONS

The above-entitled matter has been brought before me for consideration and review after proper notice required by Minnesota Statutes section 14.22 subdivision 4 was served upon all persons, associations, and other interested groups registered with the State Commissioner of Health for that purpose.

After affording interested persons an opportunity to present written data, statements and arguments, having reviewed all the written evidence adduced upon the records, files and proceedings herein, I find the following:

1. On November 15, 1982, the Department published in the State Register (7 S.R. 746) a Notice of Intent to Adopt Rules Without a Public Hearing and the proposed new rule, amendments to and repeal of parts of existing rules.

2. Two comments were received. One comment from Northern States Power Company (dated 12-15-82) merely made recommendations relating to protection of the casing above ground. The second comment was from Pickands Mather & Company (Duluth) (dated 12-14-82). That comment objected to the breadth of the definition of the term "monitoring well" in that the definition might be interpreted to include piezometer wells. In the view of Pickands Mather piezometers were not to be included. In revising the rule prior to its second publication, the Department narrowed the scope of the definition slightly to accommodate this concern.

3. That proposed rule was withdrawn by Notice in the State Register on January 24, 1983 (7 S.R. 1088).

4. On April 7, 1983, I signed an Order for Notice of Intention to Adopt Rules Without a Public Hearing.

5. On May 13, 1983, the rules were republished in the State Register (7 S.R. 1651) along with a Notice of Intent to Adopt Rules Without a Public Hearing.

6. On May 16, 1983, a copy of the Notice and proposed rules were mailed to all persons and associations who are registered with the Commissioner of Health for the purpose of receiving such notices in accordance with Minnesota Statutes § 14.055 (1982).

7. On May 16, 1983, the Statement of Need and Reasonableness was made available to all persons receiving the Notice.

8. The comment period remained open through June 15, 1983, for receipt of written comment and requests for hearing.

9. During the comment period, no person requested a hearing. A single comment was received and this was a statement in opposition to the enabling legislation and not to the language of the rules as proposed.

10. Prior to their being proposed in the State Register, the rules were reviewed by the Commissioner of Natural Resources and the Director of the Pollution Control Agency, pursuant to Minnesota Statutes § 156A.03 subdivision 1 (1982). The record contains a letter of approval from each of those agencies. The recommendations made by the Pollution Control Agency in its letter of approval were incorporated into the rules as proposed.

11. The Commissioner of Health has authority to promulgate the above-referenced rule and amendment to rules pursuant to Minnesota Statutes § 156A.03 (1982), as amended by Laws 1981, Chapter 179, section 1. That section reads as follows:

> "Subdivision 3. A professional engineer registered pursuant to the provisions of sections 326.02 to 326.15, in the branches of civil or geological engineering, shall not be required to be licensed as a water well contractor under the provisions of this section to drill test borings or to install piezometer wells for engineering purposes, or to construct ground water quality sampling and monitoring wells as defined in rules promulgated by the commissioner. Test holes ~~and~~, piezometer wells installed for engineering purposes, and other wells described by this subdivision, shall be constructed, maintained and abandoned in accordance with this chapter and the rules promulgated thereunder.
>
> "Any professional engineer engaged in the practice of constructing ground water quality sampling and monitoring wells as described in this subdivision shall register with the commissioner on forms provided by the commissioner."

Minnesota Statutes § 156A.05 subdivision 2 reads as follows:

> "The commissioner of health shall...in the manner prescribed by chapter 14,...promulgate rules and regulations necessary to carry out the purposes of sections 156A.01 to 156A.08 including, but not limited to:
>
> "...
>
> "(d) Establishment of minimum standards for design, location, construction, abandonment, and repair of wells to effectuate the purpose and intent of sections 156A.01 to 156A.08..."

12. The Department of Finance has approved the fees which are prescribed in the rule, 7 MCAR § 1.212.

13. The additions to 7 MCAR § 1.210 C are being made so as to define the terms "confining bed" and "monitoring well" as those terms are used in the proposed new rule 7 MCAR § 1.212.

14. 7 MCAR § 1.212 prescribes the procedure by which professional engineers who meet the other statutory conditions can register with the Commissioner of Health for the purpose of drilling monitoring wells in Minnesota.

15. 7 MCAR § 216 A. specifies those uses for a monitoring well which are allowed in accordance with the enabling legislation.

16. 7 MCAR § 1.216 B. allows only persons who are licensed as water well contractors or professional engineers registered with the State of Minnesota to drill monitoring wells.

17. 7 MCAR § 1.216 C. incorporates all appropriate well construction code provisions into the new rule regarding monitoring wells.

18. 7 MCAR § 1.216 D. contains special provisions applicable to monitoring well location, construction, repair and abandonment, and exempts monitoring wells from certain well code provisions which are inappropriate to monitoring wells.

19. 7 MCAR § 1.216 E. prescribes measures for the protection of monitoring wells which are not required of wells used to produce water for other purposes.

20. 7 MCAR § 1.217 C.4. and § 1.218 D. are repealed because the subject matter which was addressed therein is being revised and incorporated into the new rules proposed here.

21. The record adequately demonstrates through the Department's Statement, the need for and reasonableness of the rules which have been proposed.

Based on the foregoing Findings of Fact, the Commissioner makes the following

CONCLUSIONS

1. That the Department of Health gave proper notice of the promulgation of the proposed rules.

2. That the Department has statutory authority to propose the rules.

3. That the Department has fulfilled all relevant substantive and procedural requirements of law and rule.

4. That the Department has demonstrated the need for and reasonableness of the proposed rules by an affirmative presentation of facts in the record.

Dated: November 2, 1983

Sister Mary Madonna Ashton
Commssioner of Health

3-15-83

STATEMENT OF NEED AND REASONABLENESS

In the Matter of the Proposed
Adoption of Amendments Relating
to Registration of Engineers and
Construction of Monitoring Wells

The amendments to 7 MCAR § 1.210 C. and new rule 7 MCAR § 1.212 and 7 MCAR § 1.226 are being proposed pursuant to Laws, 1981, Chapter 179. The 1981 legislation which amended Minn. Stat., Chapter 156A, allows registered professional engineers who wish to drill monitoring wells to be able to do so without having to become licensed as water well contractors. However, the 1981 amendment does require that such engineers register with the Commissioner of Health, in order to be exempt from the licensing requirement. The law authorized the Commissioner of Health to adopt rules regarding monitoring wells and the registration of engineers. The rules discussed herein are proposed in pursuit of that authorization.

7 MCAR § 1.210 C.8. The term "confining bed" is being defined because it is a new term which is being used in these amendments. It is a term which has recently come into common use because it is more broadly descriptive than the term "aquitard" which has fallen into disuse.

7 MCAR § 1.210 C.15. The term "monitoring well" is used in the statute (Minn. Stat. § 156A.03, subd. 3, 1981 Supp.) without any

specific definition thereof. The definition being supplied in the proposed rule incorporates the statutory definition of a well (with regard to its mode of construction) (Minn. Stat. § 156A.02, subd. 1 (1980)) and explains that the qualifying term "monitoring" means the special purpose for which that type of well can be used. The definition supplied in the rule comports with that which is generally used by engineers and well drillers. The law used two terms "monitoring well" and "ground water quality sampling well" without defining either. There is no known technical difference between the two. In order to avoid any confusion, the term "groundwater quality sampling well" is defined as being synonymous with monitoring well. However, the single term "monitoring well" is used throughout the proposed amendment and proposed new rules.

7 MCAR § 1.212. This new rule prescribes the procedure by which an engineer may register with the Commissioner of Health for the purpose of drilling monitoring wells in Minnesota. The rule requires that registration be made annually which will provide a current listing of the people working in this field. A current listing is necessary in order for the Minnesota Department of Health to be able to determine who in the field setting is responsible for assuring compliance with the prescribed standards and who should be completing well records and submitting them to the Department as required by law. Annual registration is consistent with the interval for licensing water well contractors. The registration fee is required to pay for the cost of administering the registration

program. It is the same fee as that which is being charged for water well contractors and mineral explorers. Registration on a calendar year basis will be administratively efficient. It allows registration of monitor well engineers one month in advance of the water well contractors and will help to balance the licensing and registration work load. The provision that an engineer may not drill monitoring wells unless he is currently registered with the Commissioner merely repeats the language of the law and is included in the rule only for the purpose of informing one who may read the rule without benefit of the statute.

7 MCAR § 1.216 A. Because monitoring wells may be installed at contamination sites or in areas where the quality of the groundwater may be questionable, these wells produce water which may be unfit for human or animal consumption and which could be detrimental for other uses. Because the type or degree of contamination may be difficult to ascertain, it is necessary to restrict the use of the water from these wells to groundwater testing purposes only.

7 MCAR § 1.216 B. This sentence repeats the statutory restrictions which are imposed upon persons who drill monitoring wells. It is included here only to inform persons who may not have a copy of the statute available when they read the rule.

7 MCAR § 1.216 C. This is a general statement which applies to all phases associated with monitoring wells and reflects the overriding

legislative concern as stated in Minn. Stat. § 156A.01, that the quality of groundwater shall be protected, by requiring compliance with the existing Well Code. Since protection of groundwater is of paramount importance, and since monitoring wells are also water wells, it is necessary that the practices which have been established for the safe drilling of water wells also be followed in the drilling of monitoring wells. The construction and abandonment of any well regardless of its intended use, should be done in such a way as to have a minimum impact on groundwater quality. The existing Well Code was adopted to achieve that purpose which can only be fully served if the Well Code is also imposed during the construction and abandonment of monitoring wells.

7 MCAR § 1.216 D. This portion of the rule recognizes that monitoring wells serve purposes different from those of drinking water or agricultural wells. Some of the types of practices which are prohibited in the construction of these latter types of wells must be used in constructing a monitoring well. In certain instances the rule prescribes the use of additional precautions and in others it relaxes requirements contained in the existing Well Code.

Groundwater bearing formations (aquifers) consist of permeable types of geological materials which are normally separated by nearly impermeable, generally horizontal layers (confining beds). These protect the lower aquifers from water in the overlying aquifers which may be contaminated.

The purpose of a monitoring well ordinarily is to locate contamination near a site where contaminants may have been discharged. In order to be able to obtain the most useful information, it may be necessary to place the monitoring well at a point in the ground where the contamination is most likely to be intercepted. Contamination is generally carried by gravity from the area of highest potential head to an area of lower head. In areas where the surface materials are permeable, contaminants are carried vertically as a liquid from the surface into the groundwater. Rainfall may accelerate or dissolve chemicals and hasten this groundwater contamination process. Contaminants may also move horizontally at the interface of the water table or impermeable formation (confining bed). Regardless of the purpose for which a monitoring well is intended, it is paramount that a monitoring well and its mode of construction not provide additional paths of contaminant transport to lower aquifers. If it is necessary to monitor a lower aquifer, special techniques have to be employed to prevent the monitoring well from serving as a conduit for contamination, during and after construction. It is also essential to develop a rationale for exploring the deeper aquifers and to develop a plan of action for conducting further monitoring activities in a manner that will not exacerbate groundwater contamination. This need to protect groundwater from contamination by controlling drilling practices applies to the remainder of the rule and serves as the basis for all the restrictions, precautions and protective measures which are imposed in the rule.

7 MCAR § 1.216 D.1. This provision is a general prohibition against deliberately cross connecting two aquifers. It is based on the reasons stated in the preceding paragraph. The second sentence reflects a recognition that drilling is not so certain a practice that one can always predict with sufficient lead time what will be encountered. This sentence prescribes the procedure to be followed if the confining layer is breached. Compliance with this procedure should prevent the passage of large quantities of potentially contaminated water into the lower aquifer.

7 MCAR § 1.216 D.2. This provision allows for the drilling of shallow monitoring wells without special approval. For drilling to the first aquifer, there is no need to impose more stringent requirements than are contained in the existing Code and the person constructing the well can use his own judgement as to how to meet those standards. If a lower aquifer is to be drilled into, at a site of existing or potential contamination, additional construction, sealing, or casing precautions may have to be taken to prevent cross contamination between aquifers, particularly if the well is to be located in a site which is known to be heavily contaminated. In this instance, the State (administrative authority) reserves to itself the authority to decide whether and how the work can proceed safely, and, if necessary, the State will impose additional restrictions.

7 MCAR § 1.216 D.3. This provision acknowledges the fact that monitoring wells, if they are to serve the intended purpose, will

often have to be drilled in a known zone of contamination. In addition, a properly planned engineering study may specify that monitoring wells be placed at distances which are much closer to the sources of contamination than 7 MCAR § 1.217 C. would otherwise permit.

7 MCAR § 1.216 D.4. This provision serves to remind the person who is drilling a monitoring well that there are certain standards in effect for the materials which can be used in the construction of any well, whether it is a water well or a monitoring well. The use of stainless steel casing is permitted because in some cases of high soil or water acidity, and in instances where organic chemicals are sampled, stainless steel may be the only material available which is both sufficiently strong and impervious, so as not to dissolve into or affect the quality of the water being sampled.

7 MCAR § 1.216 D.5. Since a monitoring well is not to be used as a production well, and is commonly not equipped with a permanent pump, it is not mandatory to know what its yield is. Yield test information is most important to the well owner. However it is useful to the State in providing another data point in the State's groundwater mapping effort. The proposed rule requires that the information be provided to the State only if a yield test is done.

7 MCAR § 1.216 D.6. Since the usefulness of a monitoring well could be diminished if it is disinfected according to the provisions of the existing Well Code, for example, chlorine disinfection may

interfere with detailed chloride analysis, the proposed rule allows for the use of alternate disinfection methods or materials.

7 MCAR § 1.216 D.7. The requirement for venting is eliminated because the wells are not commonly equipped with permanent pumps and it would otherwise be impossible for the wells to be protected as prescribed later in the proposed rule and still be vented. Since protection is much more important over the life of the well than is venting, the venting requirement is eliminated. If the person constructing the well determines that a vent is necessary in a particular installation, the rule does not preclude the use of a vent, as long as adequate protection is still provided.

7 MCAR § 1.216 D.8. Monitoring wells are not usually constructed to provide high or even moderate water yields. The Well Code requirement establishing a two-inch casing size minimum is based on supplying an adequate water yield to the homeowner or consumer. Therefore, the two-inch minimum casing size is restrictive. However, a minimum casing size of one and one-half inches is needed for the deeper, drilled monitoring wells to facilitate adequate well development, sampling, and to allow for proper sealing and abandonment.

7 MCAR § 1.216 E.1. The use of a locked, overlapping cap is required because monitoring wells are typically located in open areas, with no pumps permanently attached to them. Use of the

locked cap will prevent the introduction of foreign materials, either accidentally or deliberately.

7 MCAR § 1.216 E.2. Because these wells are commonly located in areas near or at landfills, industrial sites, etc., they may be subject to damage from vandals or vehicle impact, i.e., snowmobiles, trucks, heavy construction equipment. Since the need for protecting a monitoring well may be dependent upon location, casing materials or local hazards, the driller or engineer is allowed to chose the protective measure which is most appropriate to the situation.

7 MCAR § 1.216 E.2.a. Three posts is the minimum number of posts that will provide a geometrical arrangement which can protect the well from impact on all sides. Four-inch diameter Schedule 40 steel pipe is of sufficient strength to provide impact protection to the well. It is readily available and is commonly used for well construction. Placement of the posts two feet from the well will allow access to the well and still create a spatial arrangement that will protect the well from low speed vehicle impact. The posts should rise four feet above the land surface so they may be visible above ordinary vegetation and snow. The posts need support to hold them in an upright position. Support strength should equal or exceed minimum pipe strength. The posts buried to a depth of four feet into solid ground or, to a depth of two feet if surrounded by concrete, will provide adequate lateral support to hold the posts upright securely. Fillng the posts with concrete will prevent the

pipe from filling with rain which could cause corrosion and weaken the pipe. A concrete post without reinforced steel rods provides inadequate strength to protect the well casing. Chemical treatment of wood with a biocidal material is ncessary to prevent rotting and weakening of the protective posts.

MCAR § 1.216 E.2.b. Allowing the use of a 12-inch high concrete platform serves a similar protective purpose and can be used in areas where there may be little snow or vegetation.

7 MCAR § 1.216 E.2.c. This provision allows the installer to protect the casing by alternate means. Such flexibility is intended to facilitate compliance with the rule, perhaps at a lower cost.

7 MCAR § 1.216 E.3. This provison allows some flexibility as to which, if any, protective measures have to be undertaken. Protection of monitoring wells increases the cost of a monitoring system. In certain areas where access to motorized vehicles or heavy equipment is prohibited or minimal, damage to the wells is much less likely to occur. Where the wells are frequently inspected or sampled, repair needs will become readily apparent to those in charge of the monitoring program. Such frequent inspection will allow for immediate repairs to be undertaken.

7 MCAR § 1.216 E.4. An over-sized steel casing is necessary to protect the plastic casing from physical or chemical damage, because

plastic casing is much more fragile than steel casing. An overlapping locking steel cap is needed for the outer casing to prevent the entry of water or extraneous matter from entering the space between the inner and outer casing. In addition, the inner casing must be capped to assure that foreign substances do not enter the well.

7 MCAR § 1.216 E.5. Seventy-two hours is considered a reasonable time in which to do whatever may be necessary to bring a damaged well into compliance with the Well Code, while still assuring that contaminants will have very little time in which to enter the casing. If a damaged well cannot be repaired, it is important that it be properly sealed and abandoned to prevent introduction of contamination into the ground water. Seven days represents a reasonable amount of time to accomplish this.

7 MCAR § 1.217 C.4 and 1.218 D. are being repealed because the rule relating to monitoring wells being proposed here includes what would be termed "observation wells". The proposed rule makes no distinction between temporary and permanent wells because such a distinction was difficult to enforce under the existing rule and also because the potential for contamination is greatest at the time of construction. This warrants treating every well as if it were permanent rather than allowing construction by unrestricted methods for "temporary" wells.

STATE OF MINNESOTA

DEPARTMENT OF HEALTH

In the Matter of the Proposed Adoption of Rules of the State Department of Health Governing Registration of Engineers and Construction of Monitoring Wells

STATEMENT OF COMPLIANCE WITH RULEMAKING PROCEDURES

I Special Assistant Attorney General Paul G. Zerby, do hereby declare that I have examined the rules and all related documents and that, based on my examination and my personal familiarity with the applicable procedures, the Administrative Procedure Act, the rules of the Office of Administrative Hearings, and the rules of the Attorney General have been followed. Any exceptions are noted below.

Dated: November 22, 1983

Paul G. Zerby

PAUL G. ZERBY
Special Assistant
Attorney General

DEPARTMENT OF FINANCE APPROVAL
FOR REGISTRATION OF ENGINEERS WHO DRILL MONITORING WELLS

Minn. Stat. § 144.122 (1982), authorizes the Commissioner of Health to set fees for the registration of professional engineers who drill monitoring wells pursuant to Minn. Stat. § 156A.03, subd. 3 (1982). Minn. Stat. § 144.122 requires that fees be set at such a level as to cover the costs of operating the program.

The Commissioner of Health has proposed to set the fee for registration of engineers at $50.00 per year.

Upon review of the attached supporting information justifying the need and amounts of the proposed fees, and pursuant to authority vested in the Department of Finance by Minn. Stat. § 16A.128 (1982), the fees as proposed by the Commissioner of Health are hereby approved.

Date: 11/1/83

Allen A. Yozamp
Operations and Budget Support
Team Leader