



## **STATEMENT OF NEED AND REASONABLENESS**

In the Matter of Proposed Amendments of  
Minnesota Rules, chapter 4727, Explorers and  
Exploratory Borings; Revisor ID: R-4755;  
Docket No. 22-9000-38393

Environmental Health Division  
Well Management Section

May 2023

General information:

- 1) Availability: The State Register notice, this Statement of Need and Reasonableness (SONAR), and the proposed rule will be available during the public comment period on the Agency's Public Notices website:  
<https://www.health.state.mn.us/communities/environment/water/wells/rules/portlandrulemaking4727.html>
- 2) View older rule records at: [Minnesota Rule Statutes https://www.revisor.mn.gov/rules/status/](https://www.revisor.mn.gov/rules/status/)
- 3) Agency contact for information, documents, or alternative formats: Upon request, this Statement of Need and Reasonableness can be made available in an alternative format, such as large print, braille, or audio. To make a request, contact Linda Prail, Environmental Health Division, Minnesota Department of Health, 625 Robert Street North, P.O. Box 64975, St. Paul, MN 55164-0975, 651-201-5792, [linda.prail@state.mn.us](mailto:linda.prail@state.mn.us).
- 4) How to read a sample Minnesota Statutes citation: Minn. Stat. § 116.07, subd. 2(f)(2)(ii)(A) is read as Minnesota Statutes, section 116.07, subdivision 2, paragraph (f), clause (2), item (ii), subitem (A).
- 5) How to read a sample Minnesota Rules citation: Minn. R. 7150.0205, subp. 3(B)(3)(b)(i), is read as Minnesota Rules, chapter 7150, part 0205, subpart 3, item B, subitem (3), unit (b), subunit (i).

## Introduction, Background, and General Need

The Minnesota Department of Health (MDH or the department) is proposing minor amendments to Minnesota Rules, chapter 4727 governing explorers and exploratory borings to address changes in the cement industry. The rule at issue is authorized under Minnesota Statutes, section 103I.101, and furthers the legislature’s intent to “protect the health and general welfare by providing a means for the development and protection of the natural resource of groundwater in an orderly, healthful, and reasonable manner.”<sup>1</sup>

Minnesota Rules, chapter 4727 defines Portland cement (PC) by its conformity with the American Society of International Association for Testing and Materials (ASTM) Standard C150 and provides for its use in myriad of processes regulated under the rule.<sup>2</sup> MDH recently learned that the cement industry is replacing Type I PC with a “low carbon” Type IL Portland-limestone cement (Type IL PC). As a result, Type I PC is generally scarce and, in certain parts of the state, unavailable. Type IL PC conforms to ASTM Standard C595, but not C150 as required under the current rules. Accordingly, its use is not authorized under our rules governing explorers and exploratory borings.

An exploratory boring is drilling done to prospect or explore for oil, natural gas, apatite, diamonds, graphite, gemstones, kaolin clay, and metallic minerals, both ferrous and nonferrous. Upon completion of an exploratory boring, the boring must be sealed according to the provisions in Minnesota Rules, chapter 4727. The boring must be sealed, permanently or temporarily for up to 10 years, using approved grouts and methods. Among the approved grouts are products that include Type I PC, which is now in scarce supply throughout the state.

Type IL PC apparently performs as well as Type I PC in all ways relevant to our regulatory interests and is widely available throughout the state. MDH learned from staff conversations with their counterparts in Michigan and Wisconsin that those states are pursuing these same types of regulatory updates to deal with their own Type I PC shortages. Wisconsin has begun an emergency process which will lead to a permanent rule, similar to the rule amendments proposed here.<sup>3</sup> Michigan is working to address industry shortages through permanent rulemaking.<sup>4</sup> Type IL PC is widely available, and its use can be authorized in rule by addressing the definition of *Portland cement*, and with other associated minor revisions as described below and proposed through this amendment process.

This urgent rule revision is necessary to avoid economic hardships for contractors and potential public health risks where exploratory borings cannot be constructed or sealed due to an ongoing cement shortage of a widely used product. Every unused boring that is not properly sealed poses a safety, health, and environmental risk because it is a potential contaminant pathway to the groundwater. Without these proposed rule amendments to address the regulatory prohibition on Type IL PC, the scarcity of Type I PC

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<sup>1</sup> Minn. Stat. §§ 103I.001 (quoted above); 103I.101, subd. 5(4) (specific statutory authority for adoption of chapter 4727 for the “establishment of minimum standards for design, location, construction, repair, and sealing of wells and borings to implement the purpose and intent of this chapter”).

<sup>2</sup> Compare Minn. R. 4727.0100, subparts 20a (defining *Portland cement* as “a construction material that conforms to ASTM Standard C150-85a”), 8 (defining “Concrete grout” as a mixture including *Portland cement*), and 18 (defining “Neat cement grout” as a mixture including *Portland cement*), with, e.g., Minn. R. 4727.1100 (establishing requirements for the temporary sealing of exploratory borings and authorizing materials containing Portland cement, in addition to certain synthetic or clay alternatives, to be used for this purpose).

<sup>3</sup> <https://dnr.wisconsin.gov/sites/default/files/topic/Rules/DG0722EDG0822ScopeStatement.pdf>

<sup>4</sup> <https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Groups/ERRC/Packets/Package-2022-39-EQ-RFR.pdf>

will cause significant economic hardships and could create barriers to timely sealing of exploratory borings. While there is a process in place for varying the rule on a case-by-case basis to allow for the use of Type IL PC,<sup>5</sup> the additional steps would create considerable delay in addressing each request to seal an exploratory boring, and MDH is statutorily obligated to collect \$275 per variance request.<sup>6</sup> The resulting delays in sealing projects pose increased risks to groundwater.

## Scope of the proposed amendments:

The following Minnesota Rule parts are affected by the proposed changes:

- Part 4727.0100, subparts 20a (defining Portland cement), and 20c (defining rapid setting cement); and
- Part 4727.0150, item D (adding ASTM Standard C595 to list of incorporations by reference in the rule).

## Public participation, stakeholder involvement, and Additional Notice Plan:

In addition to the statutorily required notices, the department will make the following notification efforts.

Minn. Stat. § 14.14 requires that in addition to its required notices, “each agency shall make reasonable efforts to notify persons or classes of persons who may be significantly affected by the rule being proposed by giving notice of its intention in newsletters, newspapers, or other publications, or through other means of communication.” The department will comply with these statutory requirements governing additional notification as detailed in this section.

The department has made reasonable efforts to notify and involve the public and stakeholders in the rule process, including discussing proposed rule amendments with the Minnesota Advisory Council on Wells and Borings and publishing the Request for Comments in the State Register. The department’s plan to further notify additional parties is as follows:

- 1) Publish its Notice of Intent to Adopt Rules Without a Hearing on the proposed rule amendments on the MDH Well Management Section dedicated a website for this rule revision:  
<https://www.health.state.mn.us/communities/environment/water/wells/rules/portlandrulemaking4727.html>.
- 2) Provide specific notice to the stakeholders listed below. The department will send an electronic notice with a hyperlink to electronic copies of the Notice of Intent to Adopt Rules Without a Hearing on the proposed rule amendments, SONAR, and proposed rule to the following entities at least 33 days before the Notice is published in the State Register. In instances where an email address was not available or could not be obtained, the department will send a copy of the Notice via U.S. mail:

Official Agency Rulemaking list

Licensed Well Contractors

Delegated Well Programs

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<sup>5</sup> Minn. R. 4727.0350.

<sup>6</sup> Minn Stat. § 103I.101, subd. 6

Advisory Council on Wells and Borings

Minnesota State Agencies, including Department of Natural Resources, Minnesota Department of Transportation, Minnesota Pollution Control Agency, Department of Labor and Industry

Local Units of Government, including Minnesota Association of Townships, Association of Minnesota Counties

Associations, including Minnesota Rural Water Association, Minnesota Water Well Association, Portland Cement Association, Minnesota Solid Waste Administrators Association, Iron Mining Association of Minnesota, Minnesota Ground Water Association, Minnesota chapter of American Institute of Professional Geologists, and Minnesota chapter of Society of Mining, Metallurgy, and Exploration

Businesses, including TCC Materials

Legislative, including Chairs, Vice Chairs, Ranking Minority Members, and Committee Administrators for appropriate committees

The department will post all relevant information and documents to its dedicated a website for this rule.

GovDelivery was used to send the Request for Comments (RFC) to all Well Management Program Rulemaking and Well and Boring Contractors and Delegated Programs subscribers as well as to an identified list of potential interested stakeholders. For identified individuals without an email address, postal service mail was used to send the RFC.

## Statutory authority

Minnesota Statutes, 103I.101, subd. 5(4), is the statutory authority for adoption of chapter 4727 for the “establishment of minimum standards for design, location, construction, repair, and sealing of wells and borings to implement the purpose and intent of this chapter.”

## Rule-by-Rule Analysis: Need and Reasonableness

Proposed change to Minnesota Rules:

### **4727.0100 DEFINITIONS**

Minnesota Rules, part 4727.0100 defines the terms used throughout the chapter.

**Subp. 20a. Portland cement.** MDH proposes expanding this definition to include Type IL PC in addition to the authorized Type I PC.

The cement industry is shifting towards a more environmentally friendly version of Portland Cement by replacing Type I PC with a “low carbon” Type IL PC. As a result, Type I PC is generally scarce and unavailable in certain parts of the state. The department staff received many communications from Licensed Well Contractors regarding the lack of the Type I PC and how that was or had potential to affect their business operations. Type IL PC conforms to ASTM Standard C595, but not C150 as authorized under the current rules. MDH consulted with industry experts and learned that Type IL PC is considered equivalent to Type I PC.

Michigan<sup>7</sup> and Wisconsin<sup>8</sup> are pursuing similar regulatory updates to deal with the Type I PC shortages. Type IL PC is widely available, and its use can be authorized in rule by addressing this definition.

For these reasons, the revision to this definition is needed and reasonable.

**Subp. 20c. Rapid setting cement.** MDH proposes revising this definition to reflect changes made to the PC definition at subpart 20a. Type III PC is a rapid setting form of PC that conforms to ASTM Standard C150 and that the rule allows. It is anticipated Type III PC could be replaced by Type IL-HE (high-early) PC with the cement industry's shift towards greener products. Type IL-HE PC conforms to ASTM Standard C595, not authorized under current rule. Type IL-HE PC is designed to be equivalent to Type III PC according to industry experts.

For these reasons, the revision to this definition is needed and reasonable.

#### **4727.0150 INCORPORATION BY REFERENCE AND ABBREVIATIONS**

This rule part identifies, among other things, those ASTM Standards incorporated into Minnesota Rules chapter 4727 by reference. The department proposes to add ASTM Standard C595 to the list because it is the standard to which the newly added form of Portland Cement conforms. Subitems will need to be renumbered to retain proper alphabetic and numeric order in light of this amendment.

### **Regulatory analysis**

Minnesota Statutes, section 14.131, requires state units to address the following subjects in the SONAR:

**A. Description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule.**

The proposed rule revisions may affect:

- People wanting or needing to have an explorer or exploratory boring constructed or sealed on their property,
- Governments wanting or needing to have an explorer or exploratory boring constructed or sealed on Government property, and
- Businesses who need, use, or provide explorers or exploratory boring services.

These people, governments, and businesses with projects where Type I PC could not be sourced because of the shortage, will be able to proceed with Type IL PC with this addition.

Cement industry experts indicated to MDH that there is no anticipated cost difference between Type I PC and Type IL or Type IL-HE PC. People, governments, and businesses are not expected to bear additional costs because of this proposed rule change.

**B. The probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues.**

These minor rule revisions will not add any additional work or cost to MDH or any other State agency. Without these rule revisions and because of the Type I PC shortage, MDH will see a substantial increase in work processing variance requests and fees. Unauthorized use of Type IL PC

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<sup>7</sup> <https://dnr.wisconsin.gov/sites/default/files/topic/Rules/DG0722EDG0822ScopeStatement.pdf>

<sup>8</sup> <https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Groups/ERRC/Packets/Package-2022-39-EQ-RFR.pdf>

will result is unnecessary enforcement to ensure compliance with Minnesota Rules.

**C. A determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule.**

These revisions are specific to add an additional eligible type of PC to the rule. Type IL PC is considered by MDH, the industry, and nearby State regulatory units as equivalent to Type I PC. This rule revision is beneficial in that it solves the significant shortage of authorized PC while ensuring the protection of human health and the environment. MDH knows of no other products for expanding the existing rules to include as an alternative for Type I PC, making this the least costly and least intrusive product to achieve the purpose of the proposed rule.

**D. A description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the Agency and the reasons why they were rejected in favor of the proposed rule.**

No alternatives exist for MDH to seriously consider.

**E. The probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals.**

None of these people, governments, or businesses will incur any additional costs because of this rule revision. This revision gives them another option for PC by allowing them to proceed with projects under the current shortage of Type I PC. MDH consulted with industry experts and found no cost difference between Type I PC and Type IL PC.

**F. The probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals.**

People, governments, and businesses have suffered project delays because of the shortage of the form of Portland Cement (Type I PC) authorized under the existing rule. This proposed rule revision will allow access to more authorized types of PC needed to complete projects.

**G. An assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference.**

There are no federal regulations about PC used for explorers and exploratory borings.

**H. An assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule.**

There are no federal regulations about PC used for explorers and exploratory borings, and this rule revision does not affect any other State rules.

## **Health Equity**

This rule revision does not cause any health inequities and may help move needed projects in rural areas of Minnesota.

## **Performance-based rules**

Minnesota Statutes, section 14.002 requires state agencies, whenever feasible, to develop rules that are not overly prescriptive and inflexible, and rules that emphasize achievement of MDH's regulatory

objectives while allowing maximum flexibility to regulated parties and to MDH meeting those objectives. This rule is performance-based to the extent that it allows flexibility to regulated parties by adding allowable materials to be used when performing regulated work.

### **Consult with MMB on local government impact**

As required by Minnesota Statutes, section 14.131, MDH consulted with Minnesota Management and Budget (MMB) about the impact the proposed rules might have on local governments. MDH did this by sending to the MMB Commissioner copies of the proposed rule and SONAR before MDH published the *Notice of Intent to Adopt Rules Without a Public Hearing*. A copy of our correspondence with MMB is attached as Appendix A.

### **Impact on local government ordinances and rules**

MDH research has determined that the proposed amendments will not have any effect on local ordinances or regulations.

### **Costs of complying for small business or city**

As stated above, there will be no increase in costs for any affected party, including a small business or city.

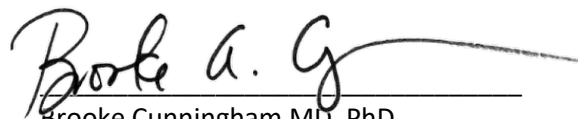
### **List of witnesses**

MDH does not anticipate having any non-agency witness if a hearing is held. The only witnesses would be MDH staff who are involved in rulemaking for these proposed rules.

### **Conclusion**

MDH has established the need and reasonableness of each proposed revisions to Minnesota Rules, chapter 4727. MDH has provided necessary notice and documented its compliance with all applicable administrative rulemaking requirements of Minnesota statute and rules.

Based on the foregoing, the proposed amendments are both needed and reasonable.



Brooke Cunningham MD, PhD  
Commissioner  
P.O. Box 64975  
St. Paul, MN 55164-0975



January 9, 2023

Ms. Hannah Millang  
Executive Budget Officer  
Minnesota Management and Budget  
658 Cedar St., Ste. 400  
St. Paul, MN 55155

**Re: Proposed Amendments to Rules Governing Exploratory Borings, *Minnesota Rules, chapter 4727*; Revisor's ID Number RD4755**

Dear Ms. Millang:

Minnesota Statutes, section 14.131, requires that an agency engaged in rulemaking consult with the Commissioner of Minnesota Management and Budget "to help evaluate the fiscal impact and fiscal benefits of the proposed rule on units of local government."

Enclosed for your review are copies of the following documents on the above-referenced rule revisions:

1. December 12, 2022, Revisor's draft of the proposed rule; and
2. December 20, 2022, draft SONAR.

If you or any other representative of the Commissioner of Minnesota Management & Budget has questions about the proposed rule revisions, please email me at [josh.skaar@state.mn.us](mailto:josh.skaar@state.mn.us). If necessary, you can also call me at 651-368-0751.

Sincerely,

/s/ Josh Skaar

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Enclosures: