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MINNESOTA DEPARTMENT OF
LABOR & INDUSTRY

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November 17, 2014

Legislative Reference Library
645 State Office Building
100 Constitution Avenue
St. Paul, Minnesota 55155

Re: In The Matter of the Proposed Rules of the Minnesota Board of High Pressure Piping Systems
Governing the Minnesota High Pressure Piping Code, Minnesota Rules, Chapter 5230; Revisor's ID
Number R-04253

Dear Librarian:

The Minnesota Board of High Pressure Piping Systems ("Board") intends to adopt rules governing the Minnesota High Pressure Piping Code, Minnesota Rules, chapter 5230. The Minnesota Department of Labor and Industry provides administrative support to the Board, including rulemaking support. The Board plans to publish a Dual Notice of Hearing in the November 17, 2014, *State Register*.

The Board has prepared a Statement of Need and Reasonableness. As required by Minnesota Statutes, sections 14.131 and 14.23, the Board is sending the Library an electronic copy of the Statement of Need and Reasonableness at the same time we are mailing our Notice of Intent to Adopt Rules.

If you have questions, please contact me at 651-284-5851 or email me at suzanne.todnem@state.mn.us.

Yours very truly,

A handwritten signature in black ink, appearing to read "Suzanne Todnem". The signature is fluid and cursive.

Suzanne Todnem
General Counsel

Attached: Statement of Need and Reasonableness

Minnesota Board of High Pressure Piping Systems

STATEMENT OF NEED AND REASONABLENESS

Proposed Amendment to Rules Governing High Pressure Piping, Minnesota Rules, Chapter 5230; Revisor's ID Number R-04253, OAH Docket # 11-1900-31930

INTRODUCTION

The Minnesota Board of High Pressure Piping Systems (“Board”) proposes to amend the rules governing the High Pressure Piping (“HPP”) Code, Minnesota Rules, Chapter 5230. The Board is proposing rule amendments to the HPP Code and to the registration of unlicensed persons working with high pressure piping. Within the pipefitting industry generally, the HPP Code regulates steam or media piping systems, ammonia piping systems, and bioprocess piping systems. High pressure steam, heating media and ammonia refrigeration systems are located almost exclusively in industrial facilities, commercial facilities and educational and business campuses. Some of these locations include power generating facilities, petrochemical refineries, food processing companies, college campuses, and ice hockey rinks. Bioprocess piping systems are used in pharmaceutical research and production facilities that require ultra-pure steam.

The HPP Code was last updated in 2009 when, for the first time, then-current national standards regarding HPP systems were incorporated by reference, as amended. Since 2009, many of those national standards have since been updated. The proposed rule amendments adopt the most recent editions of those standards, as amended.

In developing the proposed rules, the Board created the following subcommittees, comprised of Board members:

- Ammonia Committee
- Bioprocess Committee
- Steam Committee
- Welding Committee

The subcommittees held public meetings on November 21, 2013, and made recommendations to the full Board.¹ The Board discussed and voted on the recommendations to form the proposed rule.²

ALTERNATIVE FORMAT

Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make a request, contact Suzanne Todnem at Minnesota Department of Labor and Industry, 443 Lafayette Road North, St. Paul, Minnesota 55155; 651-284-5006.

STATUTORY AUTHORITY

¹ The sub-committees minutes are available at: http://www.dli.mn.gov/PDF/hpp/sub_min1113.pdf.

² See meeting minutes at: <http://www.dli.mn.gov/PDF/hpp/minutes0114.pdf>.

Minnesota Statutes, section 14.125 does not apply because this rulemaking is an amendment of existing rules for which the Legislature has not revised the statutory authority since it was granted.³

The Board's statutory authority to adopt the rules is stated in Minnesota Statutes section 326B.925, subdivision 2(a), clauses 3 and 5 which provide:

Subd. 2. Powers; duties; administrative support.

(a) The board shall have the power to:

...

(3) adopt the high pressure piping code that must be followed in this state and any high pressure piping code amendments thereto. The board shall adopt the high pressure piping code and any amendments thereto pursuant to chapter 14, and as provided in subdivision 6, paragraphs (b), (c), and (d);

...

(5) except for rules regulating continuing education, adopt rules that regulate the licensure or registration of high pressure piping contractors, journeymen, and other persons engaged in the design, installation, and alteration of high pressure piping systems, except for those individuals licensed under section [326.02, subdivisions 2](#) and 3. The board shall adopt these rules pursuant to chapter 14 and as provided in subdivision 6, paragraphs (e) and (f);

The quoted portion of this statute references subdivision 6 when adopting amendments to the HPP Code. Subdivision 6 states that amendment of the high pressure piping code requires an affirmative two-thirds or more majority vote of all voting members of the Board.

Under this statute, the Board has the necessary statutory authority to adopt the proposed rules.

REGULATORY ANALYSIS

Minnesota Statutes, section 14.131, sets out eight factors for a regulatory analysis that must be included in the SONAR. Paragraphs (1) through (8) below quote these factors and then give the Board's response.

(1) 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

Persons affected by the rule amendments will likely include high pressure pipefitters; high pressure pipefitting contractors and businesses; persons and entities owning, operating, improving or constructing high pressure piping systems; mechanical and biotechnical design professionals; manufacturers of integrated high pressure piping systems; unlicensed individuals who wish to assist in the practical construction and installation of high pressure piping and appurtenances while in the employ of a licensed high pressure piping business; engineers; designers, owners, managers and users of high pressure piping systems; state and local inspectors and enforcement authorities

³ See [Minnesota Statutes, section 14.125](#).

of high pressure piping systems; and employees and members of the public who occupy buildings with high pressure piping systems.

The classes of persons that will bear the costs of the proposed rule are those who own high pressure piping systems.

The classes of persons that will benefit from the proposed rule are those which use or own buildings with high pressure piping systems.

(2) 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

Because the Board does not enforce or administer the rules and has no budget, there are no probable costs to attribute to the Board. The Department of Labor and Industry, the agency with enforcement authority, incurs enforcement costs. Anticipated costs include the cost to purchase updated code books for state employees who inspect HPP systems or respond to HPP code questions and the cost to revise license examinations to reflect the updated code. However, because there is a high pressure piping rule current in place and enforced, there is little to no change in other enforcement costs. Enforcement costs are covered through the collection of fees and therefore there is no anticipated effect on state revenues.

(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule

The purpose of the proposed rule is to adopt a high pressure piping code and adopt rules to regulate the licensure or registration of persons involved in work relating to high pressure piping. The proposed rule incorporates by reference multiple standards. The standards were developed by respected institutions and represent the most current best practices in the industry. There are no less costly methods or less intrusive methods for achieving the purpose of the proposed rule than incorporating these standards by reference.

(4) 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 alternative methods for achieving the purpose of the proposed rule were seriously considered by the Board for this rulemaking. The American Society of Mechanical Engineers (ASME) and the International Institute of Ammonia Refrigeration (IIAR) are the only organizations who publish codes relating to design and construction of HPP that are generally accepted and in use throughout the United States. The Board began adopting established standards issued by ASME and IIAR in 2008 as it was considered the best method for adopting a high pressure piping code. The proposed rule adopts updated versions of the standards adopted in 2008.

(5) 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

The probable costs of complying with the proposed rule when compared to the costs of complying with the existing rule is approximately the same. The costs to comply with the proposed rule will be borne by owners or managers of the high pressure piping systems to which the rule applies.

Other costs include contractors, HPP system designers and government inspection departments purchasing updated copies of the standards, estimated at: ASME BPE, 2012 edition (\$230); ASME Boiler and Pressure Vessel Code, section I 2013 edition (\$380); ASME B31.1, 2012 edition (\$275); ANSI/IIAR 2, 2008 revision addendums A and B (\$80); ASME B31.5, 2013 revision (\$168); and ASME Boiler and Pressure Vessel Code, section IX (\$440).

(6) 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

If the newer ASME and ANSI/IIAR codes are not adopted, the existing Minnesota High Pressure Piping Code would remain in force. The existing code adopts outdated codes. Therefore, the probable costs or consequences of not adopting the proposed rule include codes that do not incorporate the latest technologies and safety practices in the HPP field.

(7) 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 governing high pressure piping in construction of non-federally owned HPP systems. Therefore, there are no differences to analyze.

(8) an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule. . . . ‘[C]umulative effect’ means the impact that results from incremental impact of the proposed rule in addition to other rules, regardless of what state or federal agency has adopted the other rules. Cumulative effects can result from individually minor but collectively significant rules adopted over a period of time.

There are no other state or federal regulations of high pressure piping (in construction of non-federally owned HPP systems). Therefore, there is no cumulative effect of the rule to consider for this rule.

PERFORMANCE-BASED RULES

Minnesota Statutes, sections 14.002 and 14.131, require that the SONAR describe how the agency, in developing the rules, considered and implemented performance-based standards that emphasize superior achievement in meeting the agency’s regulatory objectives and maximum flexibility for the regulated party and the agency in meeting those goals. The proposed rules, other than the licensing rule, are based largely on national model standards. These model standards are generally performance-based.

The proposed amendments to the licensing rule will ensure that individuals performing high pressure piping work have the necessary supervision, knowledge and expertise to perform high

pressure piping work that is in compliance with all relevant codes. The proposed licensing rule amendments implement performance-based standards to the extent practicable.

ADDITIONAL NOTICE

This Additional Notice Plan was reviewed by the Office of Administrative Hearings and approved in an order dated October 29, 2014, issued by Administrative Law Judge Barbara L. Neilson.

Our Notice Plan also includes giving notice required by statute. The Board will mail or email the rules and Notice of Intent to Adopt to everyone who has registered to be on the Board's rulemaking mailing lists under Minnesota Statutes, section 14.14, subdivision 1a. The Board will publish the proposed rules, the Statement of Need and Reasonableness and Notice on the Board's webpage on the Department of Labor and Industry's web site. The Board will also give notice to the Legislature per Minnesota Statutes, section 14.116.

In addition to the rulemaking mail and email lists, the Board will mail or email the Notice and proposed rule to trade associations involved in high pressure piping work, as follows:

- a. Associated Builders and Contractors
- b. Local chapter of the Association of Minnesota Building Officials (AMBO)
- c. National Association of Elevator Safety Authorities (NAESA)
- d. Minnesota Mechanical Contractors Association
- e. Association of General Contractors of Minnesota
- f. Minnesota Utility Contractors Association
- g. Minnesota Municipal Utilities Association
- h. Builders Association of Minnesota (BAM)
- i. Builders Association of the Twin Cities
- j. Minnesota State Fire Chiefs Association
- k. Minnesota Plumbing, Heating and Cooling Contractors Association
- l. American Society of Plumbing Engineers – Minnesota Chapter
- m. American Society of Mechanical Engineers – Minnesota Chapter
- n. Association of Minnesota Counties
- o. Building Owners and Managers (BOMA)/St. Paul
- p. League of Minnesota Cities
- q. American Council of Engineering Companies of Minnesota
- r. Minnesota Pipe Trade Association
- s. Minnesota State Fire Marshal Division
- t. Minnesota Association of Townships
- u. Metropolitan Council
- v. Rochester Plumbers and Pipefitters Local Union 6
- w. Duluth Plumbers and Pipefitters Local Union 11
- x. Minneapolis Plumbers Local 15
- y. St. Paul Plumbers Local 34
- z. Minneapolis Gasfitters Local 340
- aa. St. Paul Pipefitters Local 455
- bb. Minneapolis Pipefitters Local 539
- cc. Virginia Plumbers and Pipefitters Local 589

- dd. Minnesota Association of Plumbing & Mechanical Officials
- ee. City of St. Paul Mechanical Inspection Department
- ff. City of Minneapolis Mechanical Inspection Department

The Notice Plan does not include notifying the Commissioner of Agriculture because the rules do not affect farming operations per Minnesota Statutes, section 14.111.

The Board will not submit the rules to the state Council on Affairs of Chicano/Latino People at least 15 days before their initial publication in the State Register per Minnesota Statutes, section 3.922 because the rules will not have their primary effect on Chicano/Latino people.

CONSULTATION WITH MMB ON LOCAL GOVERNMENT IMPACT

As required by Minnesota Statutes, section 14.131, the Board has consulted with Minnesota Management and Budget (MMB) “to help evaluate the fiscal impact and fiscal benefits of the proposed rule on units of local government.”⁴ We did this by sending MMB copies of the documents that we sent to the Governor’s Office for review and approval on the same day we sent them to the Governor’s office on September 23, 2014. We did this before the Board’s publishing of the Notice of Intent to Adopt. The documents included: the Governor’s Office Proposed Rule and SONAR Form; the proposed rules; and the near-final SONAR. MMB Executive Budget Office Elisabeth Hammer responded, in part, as follows in a letter dated October 14, 2014: “Based upon the information provided to me by the Department of Labor and Industry, there does not appear to be significant costs to local units of government that are not recoverable through local fees as a result of the proposed rule.”⁵

The Board will submit a copy of the correspondence and the response received from Minnesota Management and Budget to OAH at the hearing or with the documents it files for ALJ review.

DETERMINATION ABOUT RULES REQUIRING LOCAL IMPLEMENTATION

As required by Minnesota Statutes, section 14.128, subdivision 1, the Board has considered whether these proposed rules will require a local government to adopt or amend any ordinance or other regulation in order to comply with these rules. The Board has determined that no local government is required to adopt an ordinance to comply with these rules.

COST OF COMPLYING FOR SMALL BUSINESS OR CITY

Agency Determination of Cost

As required by Minnesota Statutes, section 14.127, the Board has considered whether the cost of complying with the proposed rules in the first year after the rules take effect will exceed \$25,000 for any small business or small city.⁶ The Board has determined that the cost of

⁴ See [Minnesota Statutes, section 14.131](#).

⁵ The Minnesota Department of Labor and Industry provides administrative support to the Board, including on rulemaking matters, and submitted the required documentation for MMB review on behalf of the Board.

⁶ A small business is defined as a business (either for profit or nonprofit) with less than 50 full-time employees. A

complying with the proposed rules in the first year after the rules take effect will not exceed \$25,000 for any small business or small city.

The Board has made this determination based on the probable costs of complying with the proposed rule, as described in the Regulatory Analysis section of this SONAR. The probable costs are expected to be the costs of purchasing new code books and modifying training curricula to reflect the amendments. These costs will not exceed \$25,000 for any small business or small city during the first year after the rules take effect.

LIST OF WITNESSES

If these rules go to a public hearing, the Board anticipates having the following witnesses testify in support of the need for and reasonableness of the rules:

1. Mr. Larry Stevens, Chair, Minnesota Board of High Pressure Piping Systems, will testify about the Board's interest in adopting the national standards, with amendments, and in adopting amendments to the licensing and registration rules.
2. Mr. Todd Green, Chief High Pressure Piping Inspector, Department of Labor and Industry and Commissioner's representative on the Board, will provide technical information about the high pressure piping code and the need for these rule amendments in both the code and licensing rules.

RULE-BY-RULE ANALYSIS

5230.005 DEFINITIONS

Subpart 15a. The proposed amendment adds a definition for "registered unlicensed individual." This definition is added because it is a term used in Minnesota Rules, part 5230.0080, item C, but it is not defined. Other individuals allowed to construct or install high pressure piping systems are defined in Minnesota Statutes, section 326B.91. Until 2009, registered unlicensed individuals were referred to and defined as "Pipefitter trainees."⁷ The term "unlicensed individual" replaced "pipefitter trainee" in 2009 (last rulemaking by the board of HPP systems). The proposed amendment clarifies what a "registered unlicensed individual" is and that journeyman high pressure pipefitter applicants satisfying requirement C in part 5230.0080 must be registered and have actual work experience in high pressure piping. Without the definition, it is unclear that registered individuals need to be employed in the trade of high pressure pipefitting in order to gain the work experience required to apply for a license as a journeyman high pressure pipefitter.

5230.0220 BIOPROCESS PIPING

small city is defined as a city with less than ten full-time employees. See [Minnesota Statutes, section 14.127, subd. 1.](#)
⁷ See [Minnesota Rules, part 5230.0040, subpart 4 \(2007\)](#). "Pipefitter trainee" was defined as "any person other than a contracting or journeyman pipefitter, whose principal occupation is learning and assisting in the installation of high pressure piping and appurtenances under the direct supervision of a license pipefitter." This rule part was legislatively repealed, see 2007, chapter 7, article 13, section 3 at <https://www.revisor.mn.gov/laws/?year=2007&type=0&doctype=Chapter&id=140>.

Subpart 1. The proposed amendment adopts the 2012 ASME BPE standard to replace the 2005 edition. It is reasonable to adopt the 2012 edition in order to keep the Minnesota High Pressure Piping Code current with industry and practice.

5230.0260 SCOPE

The proposed amendment adopts the 2013 edition of the “ASME Code for Power Boilers” standard to replace the 2007 edition. It is reasonable to adopt the 2013 edition in order to keep the Minnesota High Pressure Piping Code current with industry and practice.

5230.0265 ADOPTION OF ASME B31.1 BY REFERENCE

The proposed amendment adopts the 2012 edition of ASME B31.1 to replace the 2007 edition. It is reasonable to adopt the 2012 edition in order to keep the Minnesota High Pressure Piping Code current with industry and practice.

5230.0275 CHAPTER I, SCOPE AND DEFINITIONS

Subpart 1. The proposed amendment adds a subpart number but does not change any portion of the text. A new subpart is being added below so introduction of subpart numbering is newly necessary here.

Subpart 2. The proposed amendment deletes subparagraph (F) of ASME B31.1, section 100.1.3. Section 100.1.3 provides a list of items to which the code does not apply. Subparagraph (F) reads, “piping included as part of a shop-assembled packaged equipment assembly within a B31.1 Code piping installation when such equipment piping is constructed to another B31 Code Section (e.g., B31.3 or B31.9) with the owner’s approval. See para. 100.2 for a definition of packaged equipment.”⁸ The proposed amendment deletes subparagraph (F) because “shop-assembled piping” is ambiguous and it is not defined in ASME B31.1 or elsewhere in this code; it gives piping system owners authority to approve compliance with codes that are not adopted in Minnesota in lieu of compliance with a code that is adopted in Minnesota; owners of piping systems might not have the required knowledge, expertise, or qualifications to make such approvals safely; and this exception poses enforcement challenges because inspectors would have to become knowledgeable in other B31 codes that are not adopted in Minnesota. It is reasonable to prohibit “pick your code” compliance options.

5230.5001 INCORPORATIONS BY REFERENCE

Subpart 1. The proposed amendment adds “with addendums A and B” to include those addendums with the 2008 ANSI/IIAR 2 standard that is currently incorporated by reference in this rule part. It is reasonable to update the adopted standard to the most current version in order to keep the Minnesota High Pressure Piping Code current with industry and practice.

Subpart 2. The proposed amendment adopts the 2013 revision of the ASME B31.5 to replace the 2006 revision that is currently adopted. It is reasonable to update the adopted standard to the most current version in order to keep the Minnesota High Pressure Piping Code current with industry and practice.

5230.5007 SECTION 11, OVERPRESSURE PROTECTION DEVICES

⁸ ASME B31.3 regulates Process Piping; ASME B31.9 regulates Building Service Piping. B31.3 and B31.9 contain direct contradictions with B31.1.

The proposed amendment adds a new subpart (number four). The new subpart amends section 11.3.3 of addendum A of ANSI/IIAR 2. The amendment to the 11.3.3 language clarifies that schedule 40 steel is the minimum for piping that discharges “to atmosphere.” “To atmosphere” is an industry phrase to indicate an open-ended pipe as compared to piping that is close-looped to other piping. Close-looped piping requirements are regulated in part 5230.5915, subpart 1, item A. The proposed amendment is reasonable because it clarifies the scope of this requirement and prevents confusion with the requirement in part 5230.5915, subpart 1.

5230.5920 QUALIFICATION OF WELDING PROCEDURES, WELDERS, AND WELDING OPERATORS

The proposed amendment adopts the 2013 edition of ASME section IX to replace the 2007 revision. It is reasonable to update the adopted standard to the most current version in order to keep the Minnesota High Pressure Piping Code current with industry and practice.

CONCLUSION

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



November 4, 2014
Date

Larry Stevens, Jr.
Chair, Minnesota Board of High Pressure Piping Systems

This SONAR was made available for public review on November 4, 2014.