

STATE OF MINNESOTA  
DEPARTMENT OF PUBLIC SAFETY

In the Matter of the Proposed  
Adoption of Rules of the State  
Department of Public Safety  
Governing Amendments to the  
Uniform Fire Code.

STATEMENT OF NEED AND REASONABLENESS

The above captioned rules are amendments to existing rules of the State Department of Public Safety. The above captioned rules were originally adopted October 3, 1975. The last time they were amended was April 11, 1983.

Pursuant to *Minnesota Statutes*, section 299F.011, the Commissioner of Public Safety through the State Fire Marshal Division is charged with the responsibility of promulgating the *Minnesota Uniform Fire Code*. It is the duty of the commissioner to amend the Minnesota Uniform Fire Code to maintain the most up-to-date standards regarding minimum safeguards of life and property together with regulating and controlling the use and maintenance of buildings and structures.

The Minnesota Uniform Fire Code Rules, effective April 11, 1983, *Minnesota Rules* 7510.0200 to 7510.3000, adopted the 1982 Edition of the *Uniform Fire Code* by reference with certain amendments as a portion of the Minnesota Uniform Fire Code. The proposed rules contain certain amendments to the *Minnesota Uniform Fire Code*, Chapter 7510, which adopt and include amendments to the 1988 Edition of the *Uniform Fire Code* as promulgated by the International Conference of Building Officials and the Western Fire Chiefs Association, Whittier, California.

The State Fire Marshal Division has evaluated the effect of the proposed rules on small businesses and has considered each of the methods prescribed by Minnesota Statutes, section 14.115, subd. 2, for reducing the impact of the rules on small businesses. The proposed rules do not require businesses to make reports so the requirements for reporting identified in items (a), (b) and (c) are not applicable.

Compliance requirements of items (a), (b), (c) and (e) are not appropriate because the purpose of these rules is to establish a set of minimum uniform fire safety standards for all public, private, commercial, industrial or residential structures within the State of Minnesota to protect life and property of the residents of the state at the least possible cost consistent with recognized standards - Minnesota Statutes, section 299F.011, subd. 4 (1978). To exempt small businesses from any or all requirements of the rules would be contrary to the statutory objectives that are the basis of the proposed rulemaking -

Minnesota Statutes, section 299F.011, subd. 4. The legislature has specifically mandated that the uniformity of fire safety standards is in the public interest - Minnesota Statutes, section 299F.011, subd. 1, which states in part:

The (fire) code and its amendments shall conform insofar as practicable to model fire codes generally in use throughout the United States...

*Minnesota Statutes*, section 14.115, subd. 2(d), calls for the establishment of performance standards for small businesses as one method of reducing the adverse impact of rules upon them. The code and its amendments are based on the application of scientific principles, approved tests and professional judgement; and to the extent possible, are in terms of results rather than requiring specific methods or materials. The Fire Code uses performance standards wherever possible. Since the performance standards apply across the board to all entities subject to the Fire Code, the methods of reducing the impact of the rules provided by Subdivision 2(d) has been utilized. No special changes are necessary for small business.

The State Fire Marshal Division has evaluated the effects of *Minnesota Statutes*, section 3.981 to 3.983 and 14.131 and believe that the promulgation of these proposed rules will not result in the expenditure of additional monies by local public bodies nor have an impact on agricultural land and meets the test of the exceptions to fiscal notes as provided by *Minnesota Statutes*, section 3.983.

The need to amend the *Minnesota Uniform Fire Code* arises because of substantial amendments made to the model Uniform Fire Code and the National Fire Codes issued by the National Fire Protection Association, which are adopted by reference in the Minnesota Code. These codes have been researched and drafted by national bodies of experts in the fire protection field. They are updated, expanded and amended at regular intervals by knowledgeable fire and building officials, architects, engineers and representatives from the various industries to which the codes apply, who possess the expertise to produce codes that will not only achieve a reasonable degree of safety to life and property, but also provide for the use of modern methods, devices, materials and techniques which will tend in part to lower construction and maintenance costs.

The proposed *Minnesota Uniform Fire Code* establishes minimum uniform rules for the State of Minnesota by adopting the entire model code and making minor amendments to it in order to be consistent with Minnesota Statutes and laws and rules promulgated by other state agencies, as well as to address fire safety concerns specific to the State of Minnesota.

A number of the amendments contained in these rules are made to conform to the State Building Code. The intent is to correlate the provisions of the Fire Code with those in the Building Code so that there is no conflict between them. The intent of the Western Fire Chiefs Association and the International Conference of Building Officials, who promulgated both model codes, was that the Building Code (containing standards for

new construction) and the Fire Code (containing maintenance standards for existing buildings) correlate and be compatible. It is further intended to provide a total package of codes (i.e. Uniform Building, Fire, Plumbing, Mechanical and Electrical Codes) which will give all jurisdictions adopting these codes a complete and comprehensive program of codes that are compatible with each other.

Other amendments have been made at the request of the Minnesota State Fire Chiefs' Association Fire Code Committee to reduce the complexity of the code adoption process at the local level. Several amendments have been made which will help local units of government by making the code less complex and easier to enforce. Another concern has been to avoid adoption of standards which mandate that local jurisdictions provide specific levels of fire suppression capability. Examples of these are standards dealing with fire apparatus, fire hose, suburban and rural water supplies, fire fighter professional qualification, and so on. The level of fire protection provided at the local level is a decision that must be made by the local governing body and should not be dictated at the state level.

In the following paragraphs the need for and reasonableness of each substantive rule is set out.

The following rules contain amendments to the 1988 Uniform Fire Code which are the same as amendments made by the corresponding rule to the 1982 Uniform Fire Code. Since the proposed rules amend the 1988 Uniform Fire Code in the same way as the existing rules amend the present 1982 Uniform Fire Code, the need for and reasonableness of these rules are not addressed in this document.

7510.3100	7510.0200
7510.3110	7510.0300
7510.3130	7510.1100, Subp. 1
7510.3140, Subp. 3	7510.1200, Subp. 6
7510.3140, Subp. 4	7510.1200, Subp. 7
7510.3140, Subp. 5	7510.1200, Subp. 8
7510.3170, Subp. 5	7510.1500, Subp. 6
7510.3180, Subp. 4	7510.1600, Subp. 5
7510.3190, Subp. 2	7510.1700, Subp. 2
7510.3210	7510.1800
7510.3220	7510.2000

7510.3240, Subp. 5

7510.2300, Subp. 3

7510.3270

7510.2500

7510.3120. The 1988 edition of the model Uniform Fire Code is adopted to replace the existing 1982 edition. *Minnesota Statutes*, section 299F.011, subd. 1, specifies that the state fire code shall conform insofar as practicable to model fire codes generally accepted and in use throughout the United States. This is the latest version of this model code available and it contains a number of provisions which were added as amendments to the 1982 Minnesota code at the time of its adoption. This most current edition of the model code takes into account recent technological advances, including newly developed products and materials as well as new applications of existing products and materials. It also takes into account the latest state of the art in building design, construction and use and the potential hazards and/or benefits that accompany those factors. Changes have also been made to provide for clarification of existing code provisions and to delete provisions that have proven ineffective or have become obsolete. The entire model code is adopted, with the exception of the amendments contained in subsequent rules. The general need for the amendments is to make the Uniform Fire Code a state code applicable to Minnesota and to the State Fire Marshal and to be consistent with Minnesota Statutes and laws and rules promulgated by other state agencies.

7510.3140. Subpart 1 carries forward an amendment to Sec. 2.102 of the 1982 Uniform Fire Code (7510.1200, Subp. 2), but deletes a provision stating that wherever the term "state fire marshal" is used in Article 2, it shall also mean the chief of any jurisdiction adopting the code. This deletion is necessary because none of the present references to the state fire marshal in Article 2 are intended to be construed to include the local fire chief. Several minor editorial changes are made to subsections (a) and (b) in order to make these sections more compatible with the language in the enabling statute, specifically *Minnesota Statutes*, section 299F.011, subd. 4.

Subpart 2 amends Sec. 2.103 by making the establishment of a fire prevention bureau optional at the discretion of the local fire chief. In previous Minnesota Rules, this section was deleted in its entirety. The intent of leaving this section in the updated code and the amendment to it is to encourage fire prevention and code enforcement at the local level without mandating a specific level of protection. This is something that is determined by local resources. While Sec. 2.101 says that the chief is responsible for the administration and enforcement of the code, not all jurisdictions need a bureau to assist in performing this function. Due to the size of some fire departments (many of which are rural in this state), one person can and does handle the code enforcement duties. In addition, approximately 95 percent of Minnesota's fire service is volunteer in nature; manpower and time are not available to form a "fire prevention bureau".

Subpart 6 amends the first paragraph of Sec. 2.304(b) by deleting all but the last sentence of this paragraph. In past editions of the Minnesota Uniform Fire Code, the reference to the standards listed in

Sec. 2.304(B) was deleted in favor of standards promulgated by the National Fire Protection Association. It was found that by doing so, valuable design, construction and installation standards and guidelines were deleted. It is necessary to retain these standards as they cover details not addressed elsewhere in the code. Local jurisdictions took note of this and began amending this reference to the standards back into the code at the local level. Retaining this reference is consistent with the intent of *Minnesota Statutes*, section 299F.011, subd. 1, allows both local jurisdictions and the State Fire Marshal to use these nationally recognized standards, and will serve to increase uniformity in code enforcement throughout the state. The remainder of the main body of the first paragraph of Sec. 2.304(b) is used to create a new Sec. 2.304(c).

Subpart 7 adopts National Fire Protection Association (NFPA) Standard No. 101 (Life Safety Code) and, by reference, makes that standard part of the Minnesota Uniform Fire Code. The NFPA National Fire Codes have been part of the Minnesota Uniform Fire Code since its adoption in 1975. In the past, all of the standards found in the National Fire Codes were adopted at the state level. It was found that in doing so, various noncode related standards dealing with such issues as fire department organization, tactics, equipment and personnel became part of state law. It is clearly beyond the scope of *Minnesota Statutes*, section 299F.011 to dictate to local governing bodies what level of fire suppression capability they will provide for their citizens. By adopting NFPA Std. No. 101, which includes a reference to another 54 of the most commonly used NFPA Standards in Chapter 32, the State Fire Marshal and the local fire code enforcement official are provided with a full range of nationally recognized standards to use to bring about a minimum degree of fire/life safety in the buildings and occupancies inspected. Since specific years of the standards adopted are identified, it becomes easier for building owners/operators, architects, designers and contractors to understand and comply with the code. In addition, this will increase the uniformity of code enforcement throughout the state. Should the local jurisdiction encounter special hazards (e.g. grain elevators, airport terminals, etc.), the NFPA Standards addressing these specific issues can be accessed through Sec. 1.102(b). The NFPA Standards augment the Uniform Fire Code by providing reasonable safeguards against loss of life and property by fire.

7510.3150. Subpart 1 amends Sec. 4.103 by deleting references to "fire prevention bureau" and requiring that all applications for a permit be made to the chief. In Minnesota Rules, part 7510.3140, subpart 2, the establishment of a fire prevention bureau was made optional. The change is necessary to allow local jurisdictions to require permits, even though they do not have a fire prevention bureau. In addition, Sec. 2.101 makes it clear that the chief is responsible for the administration and enforcement of the code.

Subpart 2 amends the permit requirements by making them optional at the discretion of the local fire chief. In past editions of the Minnesota Uniform Fire Code, Article 4 was deleted in its entirety. This was done because the State Fire Marshal does not have the personnel, funds or other resources to issue and regulate permits. It was also felt that it was neither needed nor reasonable for the State to mandate permit

requirements on local jurisdictions. The change in this edition of the code is being made at the request of the Minnesota State Fire Chiefs Association Fire Code Committee. It is necessary and reasonable to make the permit requirements optional because it will aid local governments by reducing the complexity of the code adoption process at the local level. When Article 4 was deleted in the past, local jurisdictions that wished to enforce permit requirements had to amend them back into the code at the local level. With the new language, this will no longer be necessary. The decision on whether or not to require permits can and should be made at the local level based on the jurisdiction's needs and ordinances. As set forth in *Minnesota Statutes*, section 299F.011, subd. 4, however, this decision must be made based on factors directly related to the safeguarding of life and property from the hazards of fire and must be uniform for each class or kind of activity, operation, practice or function. The language change is made only to assist the local jurisdictions; the State Fire Marshal still does not have the capability nor desire to require permits.

7510.3160. Various definitions are added and others are retained or amended to provide for applicability to the State of Minnesota, its laws and other related codes and rules already adopted, including the State Building Code and Department of Human Services rules. This is consistent with the intent of *Minnesota Statutes*, section 299F.011, Subd. 3. The definitions of "authority having jurisdiction", "building code", "state fire marshal", and "supervised living facility" are carried forward from the code presently in existence.

It is necessary to add a definition of "adult day care center" so that the code can adequately address this new concept for the care of the aged and functionally impaired. The existing code does not directly address nor classify adult day care centers, causing a lack of uniformity in classifying and applying proper code requirements to them. The definition, therefore, is intended to provide for consistency and uniformity of code enforcement in these occupancies throughout the state and to be consistent with Minnesota Rules, chapter 9555 of the Department of Human Services.

Definitions of "family day-care home" and "group day-care home" are added to be consistent with the State Building Code and Department of Human Services rules (Minnesota Rules, chapter 9502).

The definition of "guest room" is amended to make it more compatible with the definition in the State Building Code. The additional language also assists the code enforcement official in appropriately applying fire alarm requirements (which are based on the number of guest rooms present) in dormitory occupancies where sleeping accommodations are provided in one large open room (i.e. military barracks style).

The definition of "mechanical code" is also amended to make it more compatible with the State Building Code.

The definition of "municipality" is amended to make it consistent with *Minnesota Statutes*, section 16B.60, Subd. 3.

Subpart 9 amends the definition of Group E, Division 3 Occupancies in Sec. 9.117 in order to make the child day care definition compatible with the State Building Code, to add a classification for adult day care centers caring for persons who are capable of self-preservation (as

defined in Department of Human Services rules), and to be consistent with Minnesota Rules, part 9555.9730, subpart 2 of the Department of Human Services.

Subpart 10 amends the definition of Group I, Division 2 Occupancies in Sec. 9.117 to include adult day care centers caring for persons who are not capable of self-preservation (as defined in Department of Human Services rules). The amendment makes the classification of these centers consistent with Minnesota Rules, part 9555.9730, subpart 2 of the Department of Human Services.

In Subpart 11, a "sunset" date is added to the exception to the definition of Group R, Division 1 Occupancies in sec. 9.117. This exception was added during the last update to the Minnesota Uniform Fire Code and was intended to "grandfather" certain supervised living facilities. The "sunset" date is necessary to clarify the original intent of the exception. It is neither necessary nor reasonable to perpetuate the exception beyond the date originally intended as facilities constructed, licensed or newly occupied after April 11, 1983 have been designed, constructed and inspected to the regular occupancy standards of the code.

In Subpart 12 a new definition of "required by the chief" is added. This is necessary to clarify the extent of the discretion given to the chief in various sections of the code in order to be consistent with *Minnesota Statutes*, section 299F.011.

In *Minnesota Statutes*, section 299F.011, subd. 4, the uniform fire code is established as the minimum standard applicable throughout the state. Section 1.103(b) of the model uniform fire code establishes the code's application to existing buildings. Because of its application to existing buildings, some discretion must be given to the chief in order to allow the chief to: (1) modify the provisions of the code in cases where carrying out the strict letter of the code would create practical difficulties and/or undue hardship, and (2) to accept alternate materials and methods of complying with the intent of the code.

The code, however, does not allow unbridled discretion in these areas. Section 2.301(a) allows modifications of provisions of the code, "...provided that the spirit of the code shall be complied with, public safety secured and substantial justice done...". Section 2.301(b) specifies that when the use of alternate materials and methods is allowed, the chief must ensure that the "...proposed design, use or operation satisfactorily complies with the intent of this code and that the material, method of work performed or operation is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety...".

*Minnesota Statutes*, section 299F.011, subd. 4 gives local jurisdictions the discretion of enforcing regulations which specify requirements "...equal to, in addition to, or more stringent than the requirements of the uniform fire code...". There are many reasons why a local jurisdiction might want to enforce more stringent requirements. Factors considered in such a determination may include: local suppression and/or enforcement capability; fire department manpower, equipment and/or response time; local needs, regulations or ordinances; water supply; building access, height, construction and/or built-in fire protection

features; etc. Several provisions within the proposed rule point out where the use of this discretion might be appropriate. This is done in order to promote consistent and uniform code enforcement throughout the state.

Again, however, the statute does not allow unbridled discretion in this area. When discretion is used, any requirements enforced must be directly related to the safeguarding of life and property from the hazards of fire and must be uniform for each class or kind of building covered.

7510.3170. Subparts 1 and 2 carry forward an amendment from the present code, but delete a reference to police chief in Sec. 10.207(m). This is being done at the request of the Minnesota State Fire Chief Association Fire Code Committee. It is reasonable to delete this reference as in reality the local police chief very rarely becomes actively involved in the marking of fire lanes. The term "approved" as used in this subsection is intended to be consistent with the definition found in Section 9.103 of the model code.

Subpart 3 carries forward an amendment to the last sentence of Sec. 10.301(f) that appeared in previous editions of the Minnesota Uniform Fire Code but amends it further. The previous amendment, as written, required that plans for fire alarm systems, fire extinguishing systems, etc. be submitted to the chief prior to "issuance of a building permit". Literally interpreted and enforced, an entire construction project could be held up if the aforementioned plans were not submitted. It is not necessary for plans for a fire alarm installation, for example, to be submitted prior to putting in building footings, constructing the exterior walls, and so on. It is only immediately prior to the actual installation of the system that the chief needs to see the required plans. The references to "approval" in this subsection are taken directly from the model code. This is consistent with *Minnesota Statutes*, section 299F.011, subd. 1.

Subpart 4 carries forward an amendment to the standpipe requirements that appeared in previous editions of the state code, but deletes a reference to National Fire Protection Association Standard No. 14. This deletion is necessary to avoid conflicts with the State Building Code. Requirements for the installation of standpipe systems can be found in Uniform Building Code Standard No. 38-2, which is referenced in Sec. 10.309(a). The discretion given to the chief in the exception is intended to be consistent with the definition of "approved" as set forth in Section 9.103 of the model code.

7510.3180. Subpart 1 amends the Uniform Fire Code by adding a new Sec. 11.117 dealing with restrictions relating to fires or barbeques on balconies or patios. Two fires that occurred in apartment buildings in June of 1987 have pointed out the need for a restriction on the use of barbeque grills in multi-family dwellings. The most spectacular of the two occurred in Eagan, Minnesota and was caused by spontaneous combustion in a paper bag containing both used and unused charcoal briquettes. The fire ignited the second floor wood deck on which it was stored and followed the wood siding up into the roof and along the rafters, spreading to the rest of the building and resulting in an estimated

\$500,000 damage to about 60 of the 140 apartment units in the complex. More than 100 people were left homeless. A smaller fire, which occurred in a Burnsville, Minnesota apartment complex, damaged two apartments. The fire originated in a propane gas grill on a third floor wooden balcony.

Some 15 communities around the state have adopted ordinances placing restrictions on barbeque grills on balconies. Some of these ordinances have been in effect for as long as six years. The State Fire Marshal has been approached by state legislators, local fire chiefs and apartment owners to establish uniform statewide standards dealing with the issue.

The restrictions, as written, are reasonable and necessary to protect the occupants of multi-family dwellings from potential harm or disaster. There are two major problems; (1) Because a large number of persons are housed in a confined area, one person's unsafe act can have a significant negative impact on many other people. (2) Fires originating or occurring at the exterior of a building can spread rapidly and can bypass normal fire safety construction features built into the structure (e.g. fire rated corridor wall construction, fire separation walls, parapets, etc.).

Last May, a seven-year-old, two-story home in St. Cloud, Minnesota was completely destroyed by a fire which started when winds swept charcoal from a barbeque grill near the house under an attached wooden deck. The owner of the home had to be rescued by a neighbor who kicked in a basement window to save her. Damage to property and contents was estimated at \$85,000. Statewide statistics obtained through the Minnesota Fire Incident Reporting System reveal that in 1985 there were 51 fire incidents in the state involving open fired grills. These fires resulted in two injuries and \$533,250 in losses. In 1986 there were 45 such incidents in the state, resulting in \$87,325 in property losses. Most of these fires occurred in single family dwellings and did not spread to adjacent dwellings. Had they occurred in apartment buildings, however, there would have been significant potential for fires similar to the one that occurred in Eagan. Again, a number of communities in the seven-county metropolitan area have adopted barbeque ordinances to deal with this problem.

The most dramatic example of the extension of fire on the exterior of a building occurred in a ten-year-old apartment complex for the elderly in Hastings, Minnesota last June. While the fire did not originate in a barbeque grill, the three-story wood structure was completely destroyed as the fire spread across the exterior of the building, leaving over 100 elderly persons homeless. Again, this fire by-passed many fire safety construction features built into the interior of the building. Statistics obtained through the Minnesota Fire Incident Reporting System show that in 1985 there were 70 fires that originated in an exterior balcony or porch area. Property losses totalled over \$950,000. In 1985, 43 such incidents occurred, resulting in losses totalling nearly \$334,000. On that national level, statistics from the National Fire Incident Reporting System show that in 1985 there were nearly 3,560 fires that occurred in an exterior balcony or porch area. In 1986, there were approximately 3,340 such fires. Again, while not all of these fires occurred in multi-family dwellings, the potential of a fire occurring at the exterior of a building, coupled with the potential for flame

extension over the exterior surfaces of the building, creates a serious hazard for occupants of such structures.

Fires relating to barbeque grills can occur in a number of ways: sparks blowing into the siding (similar to the St. Cloud incident), briquettes dropping onto the deck below, drapes or curtains being ignited, old ashes that re-ignite (similar to the Eagan incident), use of faulty or improper equipment, and lighter fluid flaring up into the deck above.

Sec. 11.117(a) places a restriction on fires or other open flames on balconies and ground floor patios in any structure containing three or more dwelling units, when required by the chief. The language, "when required by the chief", is consistent with language throughout the model code which takes into consideration the varying capabilities and resources of local fire departments. The language is intended to place the primary responsibility for enforcement of this provision on the local jurisdiction. This is necessary for several reasons: (1) The State Fire Marshal does not have any statutory mandate to inspect apartment buildings. The State Fire Marshal does, however, have the authority to inspect these occupancies and is oftentimes requested to do so by local authorities (State Fire Marshal staff inspected 148 apartment buildings in 1986 and another 110 in 1987); (2) The State Fire Marshal does not have the staff and other resources to effectively enforce this provision in every apartment building in the state; and (3) In order to be effective, this provision must be closely monitored at the local level. An ongoing education/enforcement effort is required to ensure compliance. An appropriate analogy would be the speed limit on Minnesota's highways. Without continued monitoring by state and local law enforcement officials, compliance with the state's speed laws would be minimal to non-existent, resulting in the potential for increases in the number of deaths and injuries on the state's roads and highways.

While this provision does not mandate enforcement by the State Fire Marshal, neither is enforcement mandated at the local level. This is necessary for a number of reasons:

(1) Some local governing bodies do not agree with restrictions on barbeque grills. The discretionary language allows the local fire chief to push for adoption of the code at the local level without having to make a local amendment, simplifying the code adoption process.

(2) Most of Minnesota's fire service is made up of volunteer organizations. Many of these departments will not be able to enforce this provision due to lack of personnel, an admitted lack of expertise, and limitations in time and resources.

(3) Many factors enter into the local fire chief's decision about whether or not to enforce restrictions on barbeque grills. First of all are practical firefighting considerations: response time, water supply to the structure, presence or lack of early warning facilities (e.g. fire alarms), and possible substandard building construction. A chief of a community with a limited number of apartments, a good water supply, and a good public fire safety education program may determine that s/he can adequately protect the structure without barbeque restrictions. Other considerations such as construction type, building height and concentration of multi-family units may also be determining factors. The potential of a problem in a two-story, twelve-unit apartment building of all masonry construction is obviously less than a four-story, 120-unit complex of wood frame construction.

The restrictions apply to ground floor patios as well as balconies above ground level to avoid fires originating at ground level. An example of this type of situation is the fire which occurred in St. Cloud. Fifteen feet is considered a reasonable distance from which a fire in a grill would be unlikely to extend to the adjacent structure and is consistent with several of the local ordinances already in effect.

The restrictions apply to any structure containing three or more dwelling units. This would exempt single family dwellings and duplexes. It would also exempt townhouses which are fire separated in conformance with the State Building Code. These buildings are, by definition, considered separate buildings with zero lot lines. While the State Fire Marshal recommends that barbeque grills not be used on wood decks in these occupancies, it would not be reasonable to mandate this as it would create an unenforceable provision in the code.

Subsection (b) restricts storage on balconies and patios. This is necessary to protect against situations such as the one that occurred in Eagan. In addition, the presence of a grill or charcoal on a balcony encourages the occupant to use them in violation of the code and increases the fire load on the balcony.

The exception allows the chief to accept listed electric or gas-fired grills that are permanently mounted and wired or plumbed to the building's gas supply or electrical system, provided proper clearance is maintained. This is reasonable for several reasons: (1) There is less likelihood or possibility of a malfunction occurring in equipment tested in accordance with procedures established by nationally recognized testing laboratories (e.g. Underwriters Laboratories, Factory Mutual, etc.); (2) In addition, various safety devices are built into listed units; (3) Fixed installations minimize the possibility of the unit being tipped over and igniting the structure; and (4) Permanently installed barbeque grills providing proper clearances from combustibles should not present more of a hazard to the building and occupants than the gas or electric ranges and water heaters already installed at the interior of the building. While a minimum 18 inches is considered a safe distance for listed equipment (because of the factors mentioned previously) and is consistent with other provisions of the code, some units are listed for lesser clearances. The language in the exception takes this into consideration by allowing such installations.

It is necessary to make the installation of these types of units subject to the approval of the chief because the language in the exception is intended to address not only the unit itself, but the setting in which it is installed. Poor building design, construction or maintenance or combustible storage on the balcony could create a hazardous situation. The discretion given to the chief in the exception is intended to be consistent with the definition of "approved" as set forth in Section 9.103 of the model code.

7510.3180, Subpart 2 amends the code by adding an exception to Sec. 11.204 which references the section of the code dealing with Christmas trees (Sec. 11.210). This exception is necessary in order to eliminate confusion and clarify the intent of the code. Christmas trees are exempt from the requirements of Sec. 11.204 and must instead conform to the requirements of Sec. 11.210.

Subpart 3 carries forward an amendment that has been a part of the Minnesota Uniform Fire Code since its adoption in 1975. A change, however, has been made to Sec. 11.210 (b) allowing the use, display or storage of natural or resin bearing trees without open flames or electric light decorations in business occupancies. Such use has been prohibited in the past. The change is reasonable because, while prohibited, such use has occurred for sometime without a significant increase in the fire problem during the short time Christmas trees are present in office buildings. In addition, these trees should not present any greater hazard in these occupancies than they do in the other occupancies where they are already permitted.

7510.3190. Subpart 1 amends the code by adding a new paragraph to Sec. 12.101 dealing with egress requirements in family and group day care homes. This amendment is necessary in order to comply with restrictions placed on the State Fire Marshal and local jurisdictions by *Minnesota Statutes*, sections 299F.011, subd. 4a and 245A.15. It is consistent with language in *Minnesota Statutes*, section 245A.14 (1987) and is also consistent with the exiting requirements in Department of Human Services rules, part 9502.0425, subpart 4.

7510.3200. This rule part amends the fire alarm requirements applicable to educational occupancies in Sec. 14.104(b). This is necessary in order to make the code consistent with the State Building Code and is consistent with the direction given in *Minnesota Statutes*, section 299F.011, subdivision 1 and 3.

7510.3230. In past editions of the Minnesota Uniform Fire Code, Article 77, Explosives and Blasting Agents, was deleted in its entirety in deference to the regulations of the Minnesota Bureau of Criminal Apprehension (BCA). It was found that in so doing, appropriate storage requirements applying to these agents were deleted from the code, leaving the code enforcement official without an appropriate tool to use to ensure proper storage. BCA regulations do not contain storage requirements. Code enforcement officials had to either refer to the requirements in National Fire Protection Association (NFPA) Standard No. 495 or amend the storage requirements back into the code at the local level. It is necessary to retain the storage requirements in Article 77

because NFPA Std. No. 495 will no longer be adopted by reference in this update to the Minnesota Uniform Fire Code.

This rule part amends Article 77 by deleting only Sections 77.104 and 77.105, which are inter-related sections dealing with permits and surety bonds. It is necessary to delete the permit requirement as it is superceded by BCA regulations adopted pursuant to *Minnesota Statutes*, section 299F.71 - 299F.75. It is reasonable to delete the bonding requirement as it is tied to the deleted permit requirement. In addition, decisions about whether or not to require a bond and the amount of any such bond are best made by the local jurisdiction and should not be dictated by the state. A local jurisdiction can better determine the amount of any required bond after a careful assessment of the potential hazard and extent of legal liability that may be incurred. The amount of such bonds may be required to be higher or lower than that specified in the deleted code section.

7510.3240. Five separate amendments are being made to Article 79, Flammable and Combustible Liquids. The amendment to Sec. 79.903(g) in Subpart 5 is taken verbatim from the code presently in effect.

Subpart 1 carries forward an existing amendment to Sec. 79.101(a) but deletes a reference to Minnesota Rules, parts 7510.5200 to 7510.5400 (see Minnesota Rules, part 7510.2300, subpart 1). This is necessary because these rule parts are being repealed as part of the code update process (see Repealer section).

Subpart 2 amends Sec. 79.101 by adding a Subsection (d) containing plan review requirements for flammable liquid storage tanks. These plan review requirements already exist in current Minnesota Rule (see Minnesota Rules, part 7510.5400, subpart 2). It is necessary to add these requirements to Sec. 79.101 because Minnesota Rules, part 7510.5400 is being repealed as part of the code update process (see Repealer section). Some minor editorial changes have been made to the language for clarification purposes. Authority to adopt rules regulating flammable liquids can be found in *Minnesota Statutes*, section 299F.19.

Subpart 3 amends the code by adding an exception to Sec. 79.902(e) which will allow, under a specific set of guidelines, dispensing into the fuel tanks of motor vehicles from aboveground tanks. The code, as written, prohibits such a practice.

The State Fire Marshal was asked to consider such an amendment by the Northwest Petroleum Association. Industry representatives have pointed out the following concerns on the issue:

- (1) Most, if not all, insurance companies are refusing to insure underground tanks that have been in the ground for 15 to 20 years or more.
- (2) New restrictions passed by the U.S. Environmental Protection Agency make it extremely difficult and costly to maintain underground storage tanks. Requirements of 40 CFR, parts 280 and 281, as published in the Federal Register on September 23, 1988, require that owners of underground tanks demonstrate that they have adequate insurance coverage and/or the financial capability to compensate third parties for damages that may occur should the tanks leak. Those that cannot

demonstrate such a capability are required to post surety bonds. Owners/operators of facilities open to the public must post a bond of at least \$1 million. Owners/operators of facilities not open to the public must post a minimum \$500,000 bond. These requirements, obviously, are based on environmental concerns.

(3) In some areas of the state it is nearly impossible and/or extremely costly to bury storage tanks due to very high water tables or adverse soil conditions (e.g. granite).

While the State Fire Marshal feels that current and improving technologies continue to make underground storage of flammable and combustible liquids both feasible and safe, he concurs that with appropriate safety precautions, aboveground storage for purposes of dispensing can be permitted in order to lower the environmental liability without significantly increasing the fire liability. Under the existing code, the only way to authorize dispensing from aboveground tanks (except for farms and construction sites) is through the variance procedure.

Taking into consideration a demonstrated need and Minnesota's rural character, which provides low risk and low population densities in many areas, and recognizing the fact that under certain circumstances underground storage may be more hazardous to the environment than the fire hazard created by allowing the storage aboveground, the State Fire Marshal feels that it is reasonable and necessary to allow the dispensing of flammable and combustible liquids into the fuel tanks of motor vehicles from aboveground tanks under the specific restrictions listed in the amendment.

Another mitigating circumstance in this issue is the fact that the National Fire Protection Association (NFPA) in Standard No. 30A has been allowing aboveground dispensing under certain circumstances since 1984 [see NFPA Std. No. 30A(1987), Sec. 8-3.5]. According to NFPA's *Flammable and Combustible Liquids Handbook* (NFPA, Second Edition), "...in order to make allowances for new technology and to respond to a demonstrated need,..." an aboveground dispensing system was developed "...that could offer an equivalent degree of safety as that of the underground tank installation...". The State Fire Marshal has incorporated all of the provisions of NFPA Std. No. 30A(1987), Sec. 8-3.5 and has modified them to make them more applicable to the State of Minnesota. These provisions include:

- \* Such dispensing systems must first be approved by the local fire chief. This is necessary because of the fire hazards inherent in aboveground storage of flammable and combustible liquids. The chief must make his/her decision based on an assessment of such factors as tank location in relation to other structures, population density, availability of water and adequacy of the fire department's suppression resources. The discretion given to the chief here is intended to be consistent with the definition of "approved" as set forth in Section 9.103 of the model code. Such a requirement is also consistent with the language in NFPA Std. No. 30A(1987), Sec. 8-3.5(a).

- \* Installations are restricted to not more than three tanks not exceeding 6,000 gallons individual capacity. It is reasonable to allow up to three tanks based on a demonstrated need to make a minimum range of products available to the public. Most service stations now offer three products - regular gasoline, unleaded, and super unleaded or diesel. NFPA Std. No. 30A restricts such systems to one tank and then only in areas not open to the public. Based on the demonstrated need and additional safeguards provided in the amended exception to Sec. 79.902(e), it would be unreasonable to enforce such restrictions on tank number and location. The limitation on tank size is reasonable in order to be consistent with NFPA Std. 30A(1987), Sec. 8-3.5. The State Fire Marshal defers to research done to determine appropriate tank size by the National Fire Protection Association.
  
- \* The requirements in Subsections 2, 7, 8 and 9 are necessary to ensure safety and to be consistent with NFPA Std. No. 30A(1987), Sec. 8-3.5. It is necessary to ensure that tanks used are designed for aboveground use and the products which they are to contain. Proper precautions must be taken to minimize the possibility that product will be spilled, creating both a fire and environmental hazard. Subsection 9 serves as a reminder to owners/operators that they must still comply with other provisions of the code relating to aboveground storage. This is necessary to point out that the exception to Sec. 79.902(e) does not relieve them from these requirements.
  
- \* Subsection 3 places restrictions on the methods by which product may be removed from the tank. These restrictions are necessary to prevent: (a) gravity dispensing of the product which could result in overfilling, leading to spillage and the accompanying fire and environmental hazards, and (b) automatic syphoning of the product from the tank, which could lead to the same problems as gravity dispensing. A normally closed solenoid valve is necessary to ensure that in case of power failure, the dispensing lines will shut down to avoid spillage. The fire valve will automatically shut off the supply of product in case of fire.
  
- \* Subsection 4 requires, first of all, that all dispensing lines between dispensers and the diked area be run underground. In other words, all piping will be underground up to a point immediately adjacent to the dike, where it will be allowed to be run up and over the dike. This is to minimize the possibility of vehicular or other physical damage to the dispensing lines. Secondly, approved leak detection devices and excess flow valves are required to provide adequate warning of and to reduce product loss in case of a leak or failure in the dispensing lines. Finally, normally closed solenoid valves are required at each dispenser to ensure that in event of a power failure, the dispensing lines will shut off to avoid spillage.

- \* Subsection 5 requires overflow protection on the tanks to prevent more product from being pumped into the tank than the tank can hold. This is consistent with language found in Sec. 79.1204(f) of the Uniform Fire Code. Overflowing of a tank could cause a rupture of the fill line or could result in product escaping through vent lines. Fill pipes are required to be run underground in the same fashion as dispensing lines to protect against physical damage. There is an additional requirement of a manually-operated shut-off valve. This is intended to be an additional protection against the failure of the other required valves. By using a mechanical valve instead of one operated by other means (such as electrical), the likelihood of this valve, too, failing is remote.
- \* The prohibition against piping running through the dike in Subsection 6 is necessary to avoid the creation of a weak spot in the dike should there be a failure of the tank. It is important that the diked area contain any product escaping from the tank to minimize any potential fire and environmental dangers. If the seal around piping running through the dike is not properly installed and/or maintained, product could follow along the piping and escape from the containment area. In addition, piping running through the dike could not be easily monitored for corrosion or other damage.
- \* A requirement for lightning protection is added in Subsection 10. This is necessary because lightning is one of the major potential causes of fire in aboveground storage tanks. A lightning strike could cause a tank to rupture and ignite the product released. A nationally recognized standard (i.e. NFPA Std. No. 78) is referenced to ensure that any lightning protection system installed is properly designed and installed.
- \* Subsection 11 sets forth minimum distances that these tanks are required to be away from buildings, property lines and dispensers. These distances are double those normally required by the code for aboveground storage tanks because these tanks will be installed and operated in areas which by their very nature are frequented by the public, increasing the potential for death or serious injury. An example of this is a fire and explosion that occurred in a 2,500 gallon aboveground gasoline storage tank in a resort area in Missouri last July. The tank had sprung a leak and burst into flames around mid-afternoon. Twenty people were injured in the incident, and a nearby restaurant was destroyed in the ensuing fire.
- \* Subsection 12 allows the fire chief to require the installation of fixed fire protection systems where more than one aboveground tank is installed. This is consistent with language contained in Sec. 79.510 of the Uniform Fire Code. The presence of fixed fire protection systems, or the lack thereof, may be a mitigating factor in the chief's determination as to whether dispensing from

an aboveground system should be allowed (This is discussed earlier on in this rule part.).

- \* The exception ends with a restriction on the granting of variances to the requirements dealing with aboveground dispensing systems. Variances are restricted to tank number and size only. This is both reasonable and necessary because it is most important that the entire protection system set forth in Subsections 2 through 12 be provided and maintained to limit the liability that accompanies this new philosophy of allowing aboveground dispensing in the State of Minnesota. All the safeguards set forth in this package are necessary in order to provide at least a minimal degree of protection for lives and property.

The discretion given to the chief throughout the proposed exception is intended to be consistent with the definition of "approved" as set forth in Section 9.103 of the model code. It is also consistent with the authority granted in *Minnesota Statutes*, section 299F.011, subd.4. Both the statute and the model code set forth the parameters under which the chief's discretion may be used.

The amendment in 7510.3240, subpart 4 is made necessary because of the exception added to Sec. 79.902(e). Without this accompanying amendment to Sec. 79.903(a), dispensing from aboveground tanks would still be illegal and there would be conflicting provisions dealing with dispensing in the Minnesota Uniform Fire Code.

7510.3250. The hazardous materials placarding requirement in Section 80.104(e) is amended to include additional placarding provisions requested by the Minnesota Emergency Response Commission. The additional provisions deal with identification of "Hazard Type" and "Range Value" and are intended to be consistent with Title III of the Federal Superfund Amendments and Reauthorization Act (Public Law 99-499). These provisions are optional at the discretion of the local fire chief in order to take into account the various tactical procedures use by fire departments to handle hazardous material incidents. Some jurisdictions feel that the information provided on the identification signs specified in Uniform Fire Code Standard No. 79-3 is insufficient to make a proper determination of the extent of hazard and to formulate an appropriate and effective method of attack when dealing with incidents involving hazardous materials. Additional information regarding the physical and health hazards relating to materials present could be life-saving. In addition, the standard placard does not adequately address the storage of a mixture of materials which present multiple hazards. Range values will allow the chief to properly assess the extent of the hazard so as to appropriately determine the method and extent of both evacuation and attack. The amendment also includes a provision allowing the chief to waive the placarding requirement if the facility has an approved pre-emergency plan. Some fire departments feel that this plan is a much more effective means of handling a facility in which hazardous materials are stored or used than placarding due to the on-going changes in the types and amounts of materials present. It is reasonable to require that this

plan be consistent with the Hazardous Materials Management Plan in Appendix II-E of the Uniform Fire Code in order to maintain uniformity between jurisdictions. Because many communities now have mutual aid agreements, it is important to ensure that departments responding from outside the community understand the extent of the hazard as well. It is necessary for other emergency response agencies (e.g. police, emergency medical personnel, etc.) to have copies of the plan to ensure a coordinated evacuation and attack effort. Standards dealing with the size of placards and lettering can be found in Uniform Fire Code Standard No. 79-3. It is appropriate that the chief designate the location of signs to ensure that they are posted where they will best be seen by arriving fire companies and other emergency response personnel as determined by pre-planned attack strategies.

7510.3260. This rule part amends Sec. 82.102 by adding a Subsection (d) containing plan review requirements for LP-Gas installations. These plan review requirements already exist in current Minnesota Rule (see Minnesota Rule, part 7510.4400, subpart 1). It is necessary to add these requirements to Sec. 82.102 because Minnesota Rule, part 7510.4400 is being repealed as part of the code update process (see Repealer section).

Some minor editorial changes have been made to the language for purposes of clarification. Authority to adopt rules regulating flammable gases can be found in *Minnesota Statutes*, section 299F.19.

7510.3280. This rule part adopts a number of appendixes, by reference, as part of the code and makes some amendments to them. Appendixes I-A, I-C, II-A, II-B, II-C and VI-D are part of the current Minnesota Uniform Fire Code. Appendix IV-A, which deals with interior floor finish, is a new appendix chapter in the 1988 edition of the code. It is necessary to adopt this appendix as interior finishes are commonly changed after a building has been built and a certificate of occupancy issued, and the local fire official needs an enforcement tool to ensure that such finishes do not pose a hazard.

Subpart 2 amend the Uniform Fire Code by deleting Appendix I-A, Sec. 1(b), Effective Date. It is necessary to remove this section because, as written, it establishes correction timetables that are impractical because of the burden placed on building owners/operators and the code enforcement official. Using a strict interpretation of this section, every existing building within a community would have to be in full compliance with the requirements set forth in the Appendix within 36 months or would have to be "...vacated until made to conform.". Since most, if not all, jurisdictions are understaffed, a serious liability factor would be placed on the local jurisdictions due to an inability to perform as required by this code section. In addition, this code section, as written, makes it difficult for the code enforcement official to require correction of hazards creating immediate danger to persons and property. It is more reasonable to allow correction timetables to be negotiated between the building owner/operator and the code enforcement official. Again, negotiations at the local level are going to take into account not only the extent of the hazard, but the community's

suppression capabilities and resources as well (e.g. water supply, manpower, equipment, etc.).

Subpart 3 amends Appendix I-A, Sec. 2(a) by adding a basement exiting requirement and three exceptions to the exiting requirements. While the code addresses floors above the first story, it leaves a void when dealing with floors below. It is just as vital, if not more so, to have proper means of egress from levels below ground as it is from upper stories. Occupants trapped by fires in areas below grade are more susceptible to death or injury due to the very limited evacuation methods available to the fire department. One can ladder up to a second floor, for example, but this option is not available to areas one, two or even more levels below grade. The discretion given to the chief regarding the acceptance of ladder devices is intended to be consistent with the definition of "approved" as set forth in Section 9.103 of the model code. This particular language is taken verbatim from the model code. This is consistent with the intent of *Minnesota Statutes*, section 299F.011, subd. 1. Exceptions 2 - 4 are added to be consistent with the State Building Code, specifically Uniform Building Code (1988), Sec. 3303(a). This also falls within the intent of *Minnesota Statutes*, Section 299F.011, subdivisions 1, 3 and 4.

Subpart 4 amends the first sentence of Appendix I-A, Sec. 2(c) of the Uniform Fire Code to make the corridor construction requirements of the code consistent with both the State Building Code [specifically Uniform Building Code (1988), Sec. 3305(g)] and current State Fire Marshal Division enforcement policy. Again, this falls within the intent of *Minnesota Statutes*, section 299F.011.

Subpart 5 changes the standpipe requirement in Appendix I-A, Sec. 5 of the Uniform Fire Code to conform with the language in the body of the code (see Sec. 10.309, as amended) and to be consistent with the State Building Code [see Uniform Building Code (1988), Sec. 3805, as amended]. The amendment leaves the decision regarding whether or not to require standpipes in a specific building up to the local fire chief, who is ultimately responsible for fire protection in the individual community. This is reasonable because such a decision needs to be based on a local assessment of such factors as tactical procedures, building approach and access, water supply, and equipment and manpower.

Repealer. The current Minnesota Uniform Fire Code Rule adopting the 1982 edition of the code (Minnesota Rules, parts 7510.0200 through 7510.3000) is being repealed. This is necessary because this new rule, which adopts the 1988 and most current edition of the Uniform Fire Code, is intended to completely replace that rule. To retain the old rule would create confusion and conflicts with both the fire code and the State Building Code.

The existing LP-Gas rule (Minnesota Rules, parts 7510.4100 through 7510.4400) and the existing flammable and combustible liquids rule (Minnesota Rules, parts 7510.5100 through 7510.5400) are also being repealed. These rules have not been updated since 1974, are outdated and already conflict with the current Minnesota Uniform Fire Code. These conflicts have created confusion for tank owners, operators and installers, property owners, and code enforcement officials alike. Because of the update to a more current edition of the Uniform Fire Code,

coupled with the amendments that have been made to it, these rules are no longer necessary or appropriate. The repeal of these rules would simplify and consolidate the requirements applying to these liquids and gases, benefiting all parties concerned.

May 4, 1989