

INTERNATIONAL FUEL GAS CODE

FG2-09/10

202

Proposed Change as Submitted

Proponent: Guy Tomberlin, Bluemont, VA, representing self

Add new definitions follows:

COMBUSTIBLE ASSEMBLY. Wall, floor, ceiling or other assembly constructed of one or more component materials that are not defined as noncombustible.

COMBUSTIBLE MATERIAL. Any material not defined as noncombustible.

NONCOMBUSTIBLE MATERIALS. Materials that, when tested in accordance with ASTM E 136, have at least three of four specimens tested meeting all of the following criteria:

1. The recorded temperature of the surface and interior thermocouples shall not at any time during the test rise more than 54°F (30°C) above the furnace temperature at the beginning of the test.
2. There shall not be flaming from the specimen after the first 30 seconds.
3. If the weight loss of the specimen during testing exceeds 50 percent, the recorded temperature of the surface and interior thermocouples shall not at any time during the test rise above the furnace air temperature at the beginning of the test, and there shall not be flaming of the specimen.

Reason: These are the exact terms and definitions found in the IMC. They have been used for many years as the guiding principals for the installation of mechanical equipment. Please recall the first edition of the IMC which included fuel gas provisions, these were the definitions used. Since the IFGC fails to provide the definitions of these terms they are applied inconsistently and non-uniformly. Gypsum is a non combustible product according to the IBC however the application of gypsum in the IMC and IFGC is quite different. The IBC addresses gypsum when used to construct walls ceilings, etc.. In the IFGC, the only reference to gypsum would be when dealing with clearance to combustibles. It is common knowledge that gypsum is typically covered with a paper product which will in fact burn. It is not uncommon to see a brown or charred section of gypsum when it has been installed within the prohibited dimension of 6" for a single wall or 1" for a double wall chimney or vent (or connector). You wouldn't want this situation any more than a wood stove installed to close to gypsum, there is no difference. Excessive heat next to paper will cause fire.

The testimony on this proposal has done nothing but create confusion in fact some actually want a third definition to be added to the IFGC. That is ridiculous. The current definition in the IMC is exactly what the IFGC needs to say. Yes, gypsum is noncombustible according to the IBC but as previously stated the reference to gypsum is entirely a different application in the IFGC. Paper burns and needs to be installed outside the allowable distances according to Section 308.

Cost Impact: This code change proposal will not increase the cost of construction.

ICCFILENAME: TOMBERLIN-FG5-202

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The 3 criteria in the definition of noncombustible are unenforceable. It is inappropriate to state testing requirements in a definition. The definition of noncombustible could cause code officials to require ASTM E136 testing of all materials commonly known to be noncombustible.

Assembly Action:

Approved as Submitted

Individual Consideration Agenda

This code change proposal is on the agenda for individual consideration because the proposal received a successful assembly action. Note that the assembly action, Approved as Submitted, will be the initial motion on the floor for consideration when this item is called.

Public Comment:

Richard Grace representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA), Virginia Building Code Officials Association (VBCOA), ICC Region VII request Approval as Submitted. Note that the assembly action, Approved as Submitted, will be the initial motion on the floor for consideration when this item is called.

Commenter's Reason: The confusing testimony on this subject is merely smoke and mirrors for no good reason. Gypsum board when used around fuel gas equipment such as venting systems is a combustible. This fundamental philosophy has been in the codes many years prior the International codes inception. Who hasn't seen charred gypsum board when installed to close to a heat source? It is covered with paper! This is not an over regulation, it only requires that when a clearance to a combustible is required, that gypsum board shall not be installed within those dimensions. This isn't about checking the testing or listing and labeling. This will not create any hardship on any installation, because this is already common practice. This gains consistency within the I codes, specifically the IMC, because that is the other code that identifies with the exact same applications.

Gypsum board is not necessarily a combustible according to the IBC for the reason that it is being used for a totally different purpose. This isn't about constructing walls and ceilings it is about safely installed systems and protection from fire.

Final Action: AS AM AMPC_____ D

FG9-09/10 202

Proposed Change as Submitted

Proponents: James Ranfone, representing American Gas Association; Don Surrena, CBO, representing National Association of Home Builders (NAHB)

Revise definition as follows:

ROOM LARGE IN COMPARISON WITH SIZE OF THE APPLIANCE. Rooms having a volume equal to at least 12 times the total volume of a furnace, ~~water heater~~ or air-conditioning appliance and at least 16 times the total volume of a boiler. Total volume of the appliance is determined from exterior dimensions and is to include fan compartments and burner vestibules, when used. When the actual ceiling height of a room is greater than 8 feet (2438 mm), the volume of the room is figured on the basis of a ceiling height of 8 feet (2438 mm).

Reason:

(RANFONE)- The definition phrase "Room Large in Comparison with Size of the Appliance" is not used in relation to the installation of water heaters and therefore the term "water heater" is not technically appropriate for the definition. The phrase is only used in section 308.3(that covers air conditioning appliances) and section 308.4 (that covers central-heating boilers and furnaces).

(SURRENA)- In the 2009 IFGC the words "water heater" were added to this definition. There already exist requirements in the IFGC to cover the issue of volume of space for fuel fired appliances. Specifically, Section 304.5 covers indoor combustion air, relating to the required volume of the room. The change to this definition does not take into consideration compensation for the use of outside air, nor does it defer to manufactures installation instructions. By adding "Water Heater" to the definition, the size of the room will increase to 12 times the volume of the water heater.

This change in the sizing of rooms for water heaters is inconsistent with conventional building practices. Sizing principles and methods for providing adequate combustion air, and clearances for appliances in closets and other rooms already exist within the IFGC. Also by the definition requiring oversized rooms for water heaters, goes directly against the instructions of many manufacturers. Requiring spaces that are current code requirements for providing combustion air and clearances are unsafe or otherwise unacceptable. Manufacturer's instructions and Section 304.5 adequately cover the installation without requiring a random volume ratio.

Cost Impact: The code change proposal will not increase the cost of construction.

RANFONE-FG17-202; SURRENA-FG2-202 DOC:

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: There is no text addressing water heaters in association with this definition.

Assembly Action:

Disapproved

Individual Consideration Agenda

This code change proposal is on the agenda for individual consideration because the proposal received a successful assembly action. Note that the assembly action, Disapproved, will be the initial motion on the floor for consideration when this item is called.

Public Comment:

Richard Grace representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA), Virginia Building Code Officials Association (VBCOA), ICC Region VII requests Disapproval. Note that the assembly action, Disapproved, will be the initial motion on the floor for consideration when this item is called.

Commenter's Reason: The term water heater must remain in the *large in comparison* definition, otherwise the code fails to identify what is a closet. In that case, all appliance listings for installation within closets become a mystery. Why would a water heater not have to comply with the same provisions as any other gas appliance? Please look at this proposal and do the math, these are relatively small areas that are required for the safe and proper operation of a water heater. The manufactures are not putting these dimensions in their installation instructions, they just say to install per local code. If the code does not specify, then adequate clearance is not required.

Final Action: AS AM AMPC_____ D

FG10-09/10, Part III IRC M1303.1

NOTE: PART I & II DID NOT RECEIVE A PUBLIC COMMENT AND IS ON THE CONSENT AGENDA. PART I AND II REPRODUCED ONLY FOR INFORMATIONAL PURPOSES ONLY FOLLOWING ALL OF PART III.

Proposed Change as Submitted

Proponent: Edward A. Spiers, representing Delaware County

PART III- IRC-M

Revise as follows:

M1303.1 Label information. A permanent factory-applied nameplate(s) shall be affixed to appliances, heat pump units and condensing units on which shall appear, in legible lettering, the manufacturer's name or trademark, the model number, a serial number the energy efficiency rating and the seal or *mark* of the testing agency. A *label* shall also include the following:

1. Electrical *appliances*. Electrical rating in volts, amperes and motor phase; identification of individual electrical components in volts, amperes or watts and motor phase; and in Btu/h (W) output and required clearances.
2. Absorption units. Hourly rating in Btu/h (W), minimum hourly rating for units having step or automatic modulating controls, type of fuel, type of refrigerant, cooling capacity in Btu/h (W) and required clearances.
3. Fuel-burning units. Hourly rating in Btu/h (W), type of fuel *approved* for use with the *appliance* and required clearances.
4. Electric comfort heating *appliances*. Name and trademark of the manufacturer; the model number or equivalent; the electric rating in volts, amperes and phase; Btu/h (W) output rating; individual marking for each electrical component in amperes or watts, volts and phase; required clearances from combustibles and a seal indicating approval of the *appliance* by an *approved agency*.

- 5. Maintenance instructions. Required regular maintenance actions and title or publication number for the operation and maintenance manual for that particular model and type of product.

Reason: The change is necessitated by the enforcement of the current conservation codes. We have been instructed to verify the efficiency ratings of the equipment that is used on any particular project; it must match the RES check report or the approved plans. The information in question is currently not being put on the units themselves. The problem being, that if the box that the unit has been delivered in is gone or the efficiency sticker (with the rating on it) has been removed the information is not readily available. With most heat pumps the information is hidden in the model or serial number, but that would mean that all inspectors would have to have special knowledge of every manufacturer's information coding in order to decipher the needed information. The efficiency of a gas furnace can be figured as well if one has the knowledge to do so, but becomes problematic when multistage, variable, and modulating units are employed. This leaves the inspector to have to possess special knowledge once again, and homeowners for that matter as well. It would seem a minor cost to print this information on a unit's label, rather than having code enforcement personnel calling different contractors or suppliers to find out what EER rating a heat pump might have or the rating of a geothermal unit.

It is not a problem when the minimum rating is specified on a RES check. However, when a job is only 1% or 0.6% better than required by the IECC and a 20 SEER heat pump is called for under the heating equipment. How does one find out what has been installed to verify this information. If a 13 SEER unit is installed instead, the job would then fall short of it's required RES compliance. My understanding is that with the 2006 IECC the scenario above could be quite normal. Contractors may be tempted to spec equipment with very high efficiency ratings to be able to pass the RES compliance form and then actually use the less efficient unit(s) on the job. Or, when the process of cost trade-offs begins to take place on the project it is very normal for items that are not absolutely necessary to get chopped, efficiency ratings to get dropped. Ampacity relates to wire sizing and amperes was the intended term as used in M1303.1, Item 4.

Cost Impact: The code change proposal will not increase the cost of construction.

ICCFILENAME: SPIERS-FG2-301.6

Public Hearing Results

PART III- IRC-M

Committee Action:

Approved as Submitted

Committee Reason: It is difficult or impossible for the code official to verify in the field whether a piece of equipment such as a heat pump unit or a condensing unit meets the energy efficiency rating required by the IECC. Heat pump and condensing units are typically not referred to as appliances, but, need to be included in what is required to bear the prescribed nameplate information.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Frank A. Stanonik, requests Disapproval

Commenter's Reason: The IFGC and IMC disapproved this proposal. The IRC-M approved it. It should be disapproved for the reasons noted by the IFGC.

Final Action: AS AM AMPC____ D

NOTE: PART I & II REPRODUCED FOR INFORMATIONAL PURPOSES ONLY – SEE ABOVE

**FG10-09/10
301.5; IMC 301.6**

**PART I – IMC
Revise as follows:**

301.6 Label information. A permanent factory-applied nameplate(s) shall be affixed to appliances, heat pump units and condensing units on which shall appear in legible lettering, the manufacturer's name or trademark, the model number, serial number, the energy efficiency rating and the seal or mark of the *approved* agency. A label shall also include the following:

1. Electrical *equipment* and appliances: Electrical rating in volts, amperes and motor phase; identification of individual electrical components in volts, amperes or watts, motor phase; Btu/h (W) output; and required clearances.
2. Absorption units: Hourly rating in Btu/h (W); minimum hourly rating for units having step or automatic modulating controls; type of fuel; type of refrigerant; cooling capacity in Btu/h (W); and required clearances.
3. Fuel-burning units: Hourly rating in Btu/h (W); type of fuel *approved* for use with the *appliance*; and required clearances.
4. Electric comfort heating appliances: Name and trade-mark of the manufacturer; the model number or equivalent; the electric rating in volts, ~~ampacity~~ amperes and phase; Btu/h (W) output rating; individual marking for each electrical component in amperes or watts, volts and phase; required clearances from combustibles; and a seal indicating approval of the *appliance* by an *approved* agency.

PART II – IFGC

Revise as follows:

301.5 Label information. A permanent factory-applied nameplate(s) shall be affixed to appliances, heat pump units and condensing units on which shall appear in legible lettering, the manufacturer’s name or trademark, the model number, serial number, the energy efficiency rating and, for listed appliances, the seal or mark of the testing agency. A label shall also include the hourly rating in British thermal units per hour (BTU/h) (W); the type of fuel approved for use with the appliance; and the minimum clearance requirements.

Reason: The change is necessitated by the enforcement of the current conservation codes. We have been instructed to verify the efficiency ratings of the equipment that is used on any particular project; it must match the RES check report or the approved plans. The information in question is currently not being put on the units themselves. The problem being, that if the box that the unit has been delivered in is gone or the efficiency sticker (with the rating on it) has been removed the information is not readily available. With most heat pumps the information is hidden in the model or serial number, but that would mean that all inspectors would have to have special knowledge of every manufacturer’s information coding in order to decipher the needed information. The efficiency of a gas furnace can be figured as well if one has the knowledge to do so, but becomes problematic when multistage, variable, and modulating units are employed. This leaves the inspector to have to possess special knowledge once again, and homeowners for that matter as well. It would seem a minor cost to print this information on a unit’s label, rather than having code enforcement personnel calling different contractors or suppliers to find out what EER rating a heat pump might have or the rating of a geothermal unit.

It is not a problem when the minimum rating is specified on a RES check. However, when a job is only 1% or 0.6% better than required by the IECC and a 20 SEER heat pump is called for under the heating equipment. How does one find out what has been installed to verify this information. If a 13 SEER unit is installed instead, the job would then fall short of it’s required RES compliance. My understanding is that with the 2006 IECC the scenario above could be quite normal. Contractors may be tempted to spec equipment with very high efficiency ratings to be able to pass the RES compliance form and then actually use the less efficient unit(s) on the job. Or, when the process of cost trade-offs begins to take place on the project it is very normal for items that are not absolutely necessary to get chopped, efficiency ratings to get dropped. Ampacity relates to wire sizing and amperes was the intended term as used in M1303.1, Item 4.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I- IMC

Committee Action:

Disapproved

Committee Reason: Rating plate information is prescribed by the listing process or federal law, not by the code.

Assembly Action:

None

PART II- IFGC

Committee Action:

Disapproved

Committee Reason: Disapproval is consistent with the action taken on FG10-09/10 Part I.

Assembly Action:

None

**FG12-09/10
308.1**

Proposed Change as Submitted

Proponent: Guy Tomberlin, representing self

Revise as follows:

308.1 Scope. This section shall govern the reduction in required clearances to combustible materials, including gypsum board, and combustible assemblies for chimneys, vents, appliances, devices and equipment. Clearance requirements for air-conditioning equipment and central heating boilers and furnaces shall comply with Sections 308.3 and 308.4.

Reason: This adds clarification that gypsum has a combustible covering and therefore must be considered a combustible product. The clearances prescribed by manufacturers are typically directed to allow for adequate heat dissipation, and prevent potential fire. Paper coated products are a prime candidate for these clearances.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: This section is an IFGS section and IFGS sections are normally subject to the process that maintains the NFGC, ANSI Z223.1, however, the proposed revision affects only the IFGC, therefore, the proposal is subject to the ICC process that maintains the IFGC.

ICCFilename: TOMBERLIN-FG2-308.1

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposed revision would not recognize gypsum board made with noncombustible facings.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Richard Grace representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA), Virginia Building Code Officials Association (VBCOA), ICC Region VII, requests Approval as Submitted.

Commenter's Reason: This is a companion change to coordinate with FG 2 and prevent any possible confusion that gypsum board shall not be allowed within the spaces that require clearance to combustibles. Gypsum board when used around fuel gas equipment such as venting systems is a combustible. This fundamental philosophy has been in the codes many years prior the International codes inception. Who hasn't seen charred gypsum when installed too close to a heat source? It is covered with paper! This is not an over regulation, it only requires that when a clearance to a combustible is required, that gypsum board shall not be installed within those dimensions. This will not create any hardship on any installation, because this is already common practice. This gains consistency within the I codes, specifically the IMC, because that is the other code that identifies with the exact same applications.

Gypsum board is not necessarily a combustible according to the IBC for the reason that it is being used for a totally different purpose. This isn't about constructing walls and ceilings it is about safely installed systems and protection from fire.

Final Action: AS AM AMPC____ D

FG14-09/10, Part I

202, 401.9 (New), 401.10 (New), 404.1 (New)

Proposed Change as Submitted

Proponent: Guy Tomberlin representing VA Plumbing and Mechanical Inspectors/VA Building and Code Officials and ICC Region 7.

PART I-IFGC

1. Add new definitions as follows:

SECTION 202

THIRD-PARTY CERTIFICATION AGENCY. An approved agency operating a product or material certification system that incorporates initial product testing, assessment and surveillance of a manufacturer's quality control system.

THIRD-PARTY CERTIFIED. Certification obtained by the manufacturer indicating that the function and performance characteristics of a product or material have been determined by testing and ongoing surveillance by an approved third-party certification agency. Assertion of certification is in the form of identification in accordance with the requirements of the third-party certification agency.

THIRD-PARTY TESTED. Procedure by which an approved testing laboratory provides documentation that a product, material or system conforms to specified requirements.

2. Add new text as follows:

401.9 Identification. Each length of pipe and tubing and each pipe fitting, utilized in a fuel gas system shall bear the identification of the manufacturer.

401.10 Third-party testing and certification. All piping, tubing and fittings shall comply with the applicable referenced standards, specifications and performance criteria of this code and shall be identified in accordance with Section 401.9. Piping, tubing and fittings shall either be tested by an approved third-party testing agency or certified by an approved third-party certification agency.

404.1 Installation of materials. All materials used shall be installed in strict accordance with the standards under which the materials are accepted and approved. In the absence of such installation procedures, the manufacturer's installation instructions shall be followed. Where the requirements of referenced standards or manufacturer's installation instructions do not conform to minimum provisions of this code, the provisions of this code shall apply.

Reason:

PART I-Current IFGC contains several pipe, tube and fitting standards but never indicates how the industry must verify compliance with these standards. The proposed text is taken from the IPC and altered slightly to fit fuel gas system applications. This is the current typical industry method to demonstrate compliance with the appropriate standards. The new text provides guidance on how to achieve code compliance as intended.

PART II & III- Current IMC and IRC mechanical sections contain several pipe, tube and fitting standards but never indicates how the industry must verify compliance with these standards. The proposed text is taken from the IPC and altered slightly to fit mechanical system applications. This is the current typical industry method to demonstrate compliance with the appropriate standards. The new text provides guidance on how to achieve code compliance as intended.

Cost Impact: The code proposal will not increase the cost of construction. Tomberlin-M-5-303-RM-1-R1303

ICC FILENAME: TOMBERLIN -FG1-202.M5-303-RM1-R1303

Public Hearing Results

PART I- IFGC

Committee Action:

Disapproved

Committee Reason: The proposed text does accomplish the proponent's intent as it does not guarantee compliance with any product standard. There is no evidence of problems with fittings that do not comply with the proposed text.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Guy Tomberlin representing VA Plumbing and Mechanical Inspectors Association, VA Building and Code Officials Association and ICC Region VII, requests Approval as Submitted.

Commenter's Reason: This is current code language taken directly from the IPC and was approved, by committee, to be included in the IRC during the public hearings in Baltimore. Opposing comments came from the gas industry, which appeared to stem from a general misunderstanding of the implementation of regulations when attempting to verify if approved products have been used. One commenter asked if we expect each ½ inch 90 degree elbow to be marked? The answer is quite simple and if they had been familiar with the requirements of the IPC they would have already known the answer is clearly yes. Each manufacturer identifies their product in their own way and each fitting gets its ID mark. This is the method the plumbing pipe and fitting industry has used for years and years. In fact, the manufacturing community assisted with crafting the original language. The plumbing code requires these appropriate measures be taken and unfortunately, the IFGC and IMC only insinuate that it is to be done. Right now there is no minimum guidance as to who can certify or list pipe and fittings for gas pipe service and hydronic systems covered under the IFGC and IMC. This proposal utilizes the industry accepted, and commonly practiced, provisions from the IPC and incorporates them into the other appropriate I codes. It would only seem reasonable that gas pipe and fittings along with hydronic pipe and fittings require the same level of certification that water systems currently require.

Another commenter said "this is already required, all pipes and fittings are already required to be listed." This comment makes the point of the misunderstanding with the current code text that I previously outlined in the first paragraph. Some pipe/fitting systems, such as CSST are in fact required to be listed, but that's not true for other pipes and fittings such as steel or copper. So why is CSST required to be listed and steel pipe not? The answer is simple; it is because the steel pipe industry elects to get their products certified not listed. There is a huge difference between certification and listing that apparently many people just don't understand. Listing is a much more rigorous process. This proposal actually lessens the burden for the folks that believe all pipe and fittings must be listed.

The reality is that the majority of pipe and fitting manufactures already perform this necessary function to protect their best interest. The problem arises when products are manufactured and no oversight is provided. Some overseas manufacturers actually consider self- certification as an acceptable form of certification. This is just not the case. This is where the code is lacking the appropriate provisions and without the additional text we have proposed, the end user could easily end up getting a less than satisfactory product and possibly even unsafe. The IMC committee disapproved this with no supporting reason, the ROP simply says based on the IFGC Committee's disapproval. This is an unfortunate situation because the same situation exists for hydronic systems and more and more manufacturers are making new pipe and fitting systems for hydronics.

Final Action: AS AM AMPC D

FG14-09/10, Part II

IMC 202, 301.3 (New), 301.4 (New), 301.5 (New)

Proposed Change as Submitted

Proponent: Guy Tomberlin representing VA Plumbing and Mechanical Inspectors/VA Building and Code Officials and ICC Region 7.

PART II - IMC

1. Add new definitions as follows:

THIRD-PARTY CERTIFICATION AGENCY. An approved agency operating a product or material certification system that incorporates initial product testing, assessment and surveillance of a manufacturer's quality control system.

THIRD-PARTY CERTIFIED. Certification obtained by the manufacturer indicating that the function and performance characteristics of a product or material have been determined by testing and ongoing surveillance by an approved third-party certification agency. Assertion of certification is in the form of identification in accordance with the requirements of the third-party certification agency.

THIRD-PARTY TESTED. Procedure by which an approved testing laboratory provides documentation that a product, material or system conforms to specified requirements.

2. Add new text as follows:

301.3 Identification. Each length of pipe and tubing and each pipe fitting, utilized in a mechanical system shall bear the identification of the manufacturer.

301.4 Plastic pipe, fittings and components. Plastic pipe, fittings and components shall be third-party certified as conforming to NSF 14.

301.5 Third-party testing and certification. Piping, tubing and fittings shall comply with the applicable referenced standards, specifications and performance criteria of this code and shall be identified in accordance with Section 301.3. Piping, tubing and fittings shall either be tested by an approved third-party testing agency or certified by an approved third-party certification agency.

Reason:

PART I-Current IFGC contains several pipe, tube and fitting standards but never indicates how the industry must verify compliance with these standards. The proposed text is taken from the IPC and altered slightly to fit fuel gas system applications. This is the current typical industry method to demonstrate compliance with the appropriate standards. The new text provides guidance on how to achieve code compliance as intended.

PART II & III- Current IMC and IRC mechanical sections contain several pipe, tube and fitting standards but never indicates how the industry must verify compliance with these standards. The proposed text is taken from the IPC and altered slightly to fit mechanical system applications. This is the current typical industry method to demonstrate compliance with the appropriate standards. The new text provides guidance on how to achieve code compliance as intended.

Cost Impact: The code proposal will not increase the cost of construction. Tomberlin-M-5-303-RM-1-R1303

ICC FILENAME: TOMBERLIN -FG1-202.M5-303-RM1-R1303

Public Hearing Results

PART I- IFGC

Committee Action:

Disapproved

Committee Reason: The proposed text does accomplish the proponent's intent as it does not guarantee compliance with any product standard. There is no evidence of problems with fittings that do not comply with the proposed text.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Guy Tomberlin representing VA Plumbing and Mechanical Inspectors Association , VA Building and Code Officials Association And ICC Region VII, requests Approval as Submitted.

Commenter's Reason: See FG14-09/10, Part I

Final Action: AS AM AMPC____ D

FG14-09/10, Part III

IRC R202, M1301.2 (New), M1301.3 (New), M1301.4 (New), M1301.5 (New)

Proposed Change as Submitted

Proponent: Guy Tomberlin representing VA Plumbing and Mechanical Inspectors/VA Building and Code Officials and ICC Region 7.

PART III – IRC

1. Add new definitions as follows:

THIRD-PARTY CERTIFICATION AGENCY. An approved agency operating a product or material certification system that incorporates initial product testing, assessment and surveillance of a manufacturer's quality control system.

THIRD-PARTY CERTIFIED. Certification obtained by the manufacturer indicating that the function and performance characteristics of a product or material have been determined by testing and ongoing surveillance by an approved third-party certification agency. Assertion of certification is in the form of identification in accordance with the requirements of the third-party certification agency.

THIRD-PARTY TESTED. Procedure by which an approved testing laboratory provides documentation that a product, material or system conforms to specified requirements.

2. Add new text as follows:

M1301.2 Identification. Each length of pipe and tubing and each pipe fitting, utilized in a mechanical system shall bear the identification of the manufacturer.

M1301.3 Installation of materials. All materials used shall be installed in strict accordance with the standards under which the materials are accepted and approved. In the absence of such installation procedures, the manufacturer's installation instructions shall be followed. Where the requirements of referenced standards or manufacturer's installation instructions do not conform to minimum provisions of this code, the provisions of this code shall apply.

M1301.4 Plastic pipe, fittings and components. Plastic pipe, fittings and components shall be third-party certified as conforming to NSF 14.

M1301.5 Third-party testing and certification. Piping, tubing and fittings shall comply with the applicable referenced standards, specifications and performance criteria of this code and shall be identified in accordance with Section M1301.2. Piping, tubing and fittings shall either be tested by an approved third-party testing agency or certified by an approved third-party certification agency.

Reason:

PART I-Current IFGC contains several pipe, tube and fitting standards but never indicates how the industry must verify compliance with these standards. The proposed text is taken from the IPC and altered slightly to fit fuel gas system applications. This is the current typical industry

method to demonstrate compliance with the appropriate standards. The new text provides guidance on how to achieve code compliance as intended.

PART II & III- Current IMC and IRC mechanical sections contain several pipe, tube and fitting standards but never indicates how the industry must verify compliance with these standards. The proposed text is taken from the IPC and altered slightly to fit mechanical system applications. This is the current typical industry method to demonstrate compliance with the appropriate standards. The new text provides guidance on how to achieve code compliance as intended.

Cost Impact: The code proposal will not increase the cost of construction. Tomberlin-M-5-303-RM-1-R1303

ICC FILENAME: TOMBERLIN -FG1-202.M5-303-RM1-R1303

Public Hearing Results

PART III-IRC-M

Committee Action:

Approved as Submitted

Committee Reason: The proposed text provides the means by which compliance with the code referenced product standards is demonstrated and verified.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Frank A. Stanonik, requests Disapproval.

Commenter's Reason: The IFGC and IMC disapproved this proposal. The IRC-M approved it. It should be disapproved for the reasons noted by the IFGC.

Final Action: AS AM AMPC_____ D

FG15-09/10

404.2 (New)

Proposed Change as Submitted

Proponent: James Ranfone representing American Gas Association

Add new text as follows:

404.2 CSST. CSST piping systems shall be installed in accordance with the terms of their approval, the conditions of listing, the manufacturer's installation instructions and this code.

Reason: The code requires that equipment and appliances be listed. Section 305.1 requires that equipment and appliances be installed by the terms of their approval, in accordance with the conditions of listing, the manufacturer's installation and this code. The terms equipment and appliance do not necessarily cover CSST which is the only gas piping system that is required to be listed to an ANSI standard. Therefore, the code is missing a specific statement regarding the installation of CSST as a listed system.

Cost Impact: The code change proposal will not increase the cost of construction.

RANFONE-FG12-404.2_NEW.DOC:

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: Current code text requires appliances and equipment to be installed in accordance with the listing, manufacturer's instructions and the code, but, a listed piping system such as CSST is not accurately described as equipment or an appliance. The proposed text will provide coverage for CSST systems to make sure that they are installed as is required for other listed products.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Tim Manz representing Association of Minnesota Building Officials (AMBO), requests Disapproval.

Commenter's Reason: This proposed code change is not necessary because CSST falls under the definition of equipment, which is defined in the IFGC as "apparatus and devices other than appliances." Merriam Webster dictionary defines apparatus as "a set of materials or equipment designed for a particular use" and this adequately describes products such as CSST.

Final Action: AS AM AMPC _____ D

FG16-09/10

404.4

Proposed Change as Submitted

Proponents: James Ranfone, representing American Gas Association; Don Surrena, CBO, representing National Association of Home Builders (NAHB)

Delete and substitute as follows:

~~**404.4 Underground penetrations prohibited.** Gas piping shall not penetrate building foundation walls at any point below grade. Gas piping shall enter and exit a building at a point above grade and the annular space between the pipe and the wall shall be sealed.~~

404.4 Piping through foundation wall. Underground piping, where installed below grade through the outer foundation or basement wall of a building, shall be encased in a protective pipe sleeve or shall be protected by an approved device or method. The annular space between the gas piping and the sleeve and between the sleeve and the wall shall be sealed.

Reason:

(RANFONE)- No evidence was provided during the 2007-2008 revision cycle that justified adding the prohibition of customer-owned gas piping from penetrating a foundation wall below grade. Testimony centered on the possibility that gas from an underground leak would be significant enough to cause gas migration along the buried gas piping and entry into the building. No statistics were presented and AGA does not know of any incidents of gas migrating along a customer-owned underground piping that has resulted in an explosion. Section 404.4 covers only customer-owned piping, most of which would be low pressure (the remaining would be a maximum of 2 psi) that does not result , in the event of a underground leak, in significant gas leakage and migration. The low number of incidences AGA is aware of were traced to utility-owned gas service lines that operate at much higher pressures (often up to 40 psi). The proposed language combines the 2006 IFGC language with the approved changes FG20-07/08 and FG21-07/08.

(SURRENA)- The purpose of this proposal is to allow gas piping to enter a foundation below grade as it has done in the past. Without this change, gas piping will have to come above ground before entering a building.

The conventional installation practice of allowing piping to go through foundation walls below grade should not be prohibited. This is an installation method that has been used for decades. No data was ever presented that would show a safety problem or inadequacy when a proper installation and sealing of the opening was installed in accordance with the IFGC.

Requiring above grade entry points into the foundation will require extra piping and joints, both inside and outside, exposing the piping system to physical damage and increased risk of leakage on the outside of buildings as well as within the building. This increase in outside exposure will be particularly significant in a city or at congested commercial locations where piping must come above grade at times through sidewalks at the front or rear of the building or come through the ground in public ways before turning to enter the foundation or building. This will also present practical issues of locating the exterior and interior piping system to have entry points that are compatible with the building design, i.e., doorways, loading docks, accessible entry systems (ramps) etc. There will also be additional costs in these circumstances when the underground piping must be relocated to miss one of the items just mentioned.

Accepting this change will coordinate the IFGC provisions with all other industry Fuel Gas Codes.

Cost Impact: The code change proposal will not increase the cost of construction.

RANFONE-FG13-404.4-SURRENA-FG3-404.4DOC:

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: Customer-owned piping would operate at 2 psi and less and such pressure would not result in significant migration of gas leakage. No documentation was provided to justify the current prohibition on underground penetrations. The proposed new text restores previous code text that prescribed the method of protecting and sealing underground penetrations of foundation walls. The current text will require extra piping, fittings and joints that will be exposed to physical damage with increased risk of leakage. The proposed text is consistent with other fuel gas codes.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Guy McMann representing Colorado Association of Plumbing and Mechanical Officials (CAPMO), requests Disapproval.

Commenter's Reason: There have been many cases throughout the country where damage has occurred as a result of a gas leakage that originated underground and made its way into the building. One of the reasons this occurs is because natural gas will follow the pipe in its ditch due to less resistance. Piping entering foundations below grade provides a path for gas to follow. The safety of residents should not be left up to how well a bead of caulking has been applied. Plastic piping is also subject to the same scenario, especially when the 8-inch burial depth is taken into consideration. Plastic will not hold up to common tools such as shovels, spades, picks and roto-tillers. Also think about expansive soil and the potential effect it can have on the piping. The heaving soil will have a devastating effect on a caulked sleeve. It's not uncommon to have a gas line snapped off completely at the foundation wall due to the overwhelming force of expansive soil. Only by requiring the pipe to enter the building above grade will we eliminate the likelihood that gas would enter the building. The protection of life, limb, property and the potential threat of explosion should not be determined by the integrity of a sealed joint alone. Depending on how deep the ditch is, the weight of the back-fill alone could be significant enough to have an impact on a caulked joint. One should also consider that the joint could deteriorate over time. The perfect recipe for an explosion is a 4-15% gas to air ratio.

Final Action: AS AM AMPC____ D

FG18-09/10

407.2

Proposed Change as Submitted

Proponent: Don Surrena, CBO, representing National Association of Home Builders (NAHB)

Revise as follows:

407.2. Design and Installation. *Piping* shall be supported with ~~metal~~ pipe hooks, ~~metal~~ pipe straps, ~~metal~~ bands, ~~metal~~ brackets, or ~~metal~~ hangers, or building structural components, suitable for the size of *piping*, of adequate strength and quality, located at intervals so as to prevent or damp out excessive vibration. *Piping* shall be anchored to prevent undue strains on connected appliances and shall not be supported by other *piping*. Pipe hangers and supports shall conform to the requirements of MSS SP-58 and shall be spaced in accordance with Section 415. Supports, hangers, and anchors shall be installed so as not to interfere with the free expansion and contraction of the *piping* between anchors. All parts of the supporting equipment shall be designed and installed so they will not be disengaged by movement of the supported *piping*.

Reason: The purpose of this proposal is to retain the provisions of the 2006 International Code (IFGC) allowing for more than just metal to be used as pipe strapping.

This change from the 2006 International Fuel Gas Code (IFGC) is clearly proprietary in nature. To disallow any other material that is proven to meet the requirements for support is contrary to the spirit of the ICC family of codes (I-Codes). Favoring one type of material without reason is unacceptable. The change to the 2009 IFGC is too restrictive and eliminates other support materials that have been used successfully for years. The 2009 change will have a significant impact on several manufacturers that have established alternate materials other than metal supports. If the structural properties of a material is tested and proven to meet the structural specifications for supporting the piping it should be accepted for use. These other materials should be eliminated and the code allowed to become exclusionary. The I-Codes have railed from the exclusivity of other

codes that limit the type of materials. These other materials have proven themselves acceptable over the years and should not be eliminated to prosper one type of material.

We encourage the adoption of this proposal to allow any and all materials that meet the requirements of the code to be used, not just a proprietary product or single material.

Cost Impact: The code change proposal will not increase the cost of construction.

SURRENA_FG1-407.2.DOC:

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The current text favors one material over others without reason. Other materials have been used successfully for many years. Other materials, besides metal, that have been tested and proven to have the structural strength necessary to support piping should be allowed.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Robert Adkins representing VPMA/VBCOA, requests Disapproval.

Commenter's Reason: In a fire scenario, metallic hangers will maintain the integrity of the gas piping installation, supporting it much longer than plastic or nylon hangers would. If the hangers fail to hold due to melting, softening or burning and the piping support fails, the piping system could break and contribute a gas fuel load to the fire, which in turn increases the potential for a much larger fire or explosion.

Public Comment 2:

Guy McMann representing Colorado Association of Plumbing and Mechanical Officials (CAPMO), requests Disapproval.

Commenter's Reason: Removing the word "metal" will result in inferior support installations permitting such materials as nylon straps such as one might encounter on a flex duct installation. There are many ways to hang piping and spelling out that hangers must be metal of some type ensures a safer installation. This proposed code change will also result in the IFGC being less stringent than ANSI Z 223.1/NFPA 54 (NFGC) as that standard still requires metal hangers. This is a step in the wrong direction for the IFGC and may result in support failures resulting in serious damage.

Public Comment 3:

Tim Manz, requests Disapproval.

Commenter's Reason: MSS SP-58 requires metallic pipe hangars and supports, so this code change proposal contradicts itself. It is critical to have metallic pipe hangars and supports to maintain the structural integrity of gas piping systems.

Final Action: AS AM AMPC____ D

FG23-09/10 409.5.3

Proposed Change as Submitted

Proponent: Brent Ursenbach, Salt Lake County, representing Utah Chapter of ICC

Revise text as follows:

409.5.3 Located at manifold. Where the *appliance* shutoff valve is installed at a manifold, such shutoff valve shall be located within 50 feet (15 240 mm) of the *appliance* served, shall be located on the same building level, and shall be readily accessible and permanently identified. The *piping* from the manifold to within 6 feet (1829 mm) of the *appliance* shall be designed, sized and installed in accordance with Sections 401 through 408.

Reason: It is common to have a gas manifold located in a basement level furnace room, with another furnace for an upper level of a 2 story home located in the attic. The commissioning/start-up, altitude or gas heat value adjustments that may be required on gas furnaces typically require the gas control valve and manifold to be removed from the furnace for orifice inspection and orifice changing, which requires the gas to be shut off outside the furnace. Performing an inlet gas pressure test at a furnace requires removal of a plug at the gas inlet of the gas control valve, which also requires the gas to be shut off outside the furnace to attach a test gauge adapter. It is unreasonable and may pose a safety hazard to expect a technician to make multiple trips from the upper attic mechanical room down a ladder, then down two flights of stairs to the basement furnace room where the manifold is located shut off the gas. The technician then returns to the upper furnace. Typically the gas needs to be turned on and off two, three or four times or more to complete these procedures. It is reasonable to expect a shut off valve to be located on the same level as the appliance.

Cost Impact: The code change proposal will not increase the cost of construction.

ICCFILENAME: URSENBACH-FG1-409.5.3.doc

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The current distance limit of 50 feet assures that convenient access is provided without requiring the valve to be located on the same floor level as the appliance served.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Brent Ursenbach representing Utah Chapter of ICC, requests Approval as Submitted.

Commenter's Reason: The reason given by the Committee for disapproval is that any appliance shutoff valve that is located within 50' of the appliance served is *convenient*.

The opening statement of the Preface of the IFGC reads: "Internationally, code officials recognize the need for a modern, up-to-date fuel gas code addressing the design and installation of fuel gas systems and gas-fired appliances through requirements emphasizing performance. The *International Fuel Gas Code*®, in this 2009 edition, is designed to meet these needs through model code regulations that safeguard the public health and safety in all communities, large and small."

The change made in the 2009 IFGC 409.5.3, allowing an appliance gas shutoff to be 50 feet from an appliance simply is not safe and does not safeguard public health and safety. Virtually every experienced gas technician has encountered multiple situations where upon complete of a repair of a gas appliance, he or she has discovered a gas leak upon turning the gas back on to the appliance. The leaks may be small, while other times it may be large. The leak may be a faulty pipe fitting, a leaking hose on test equipment, a missing plug in a control valve or a loose union, connector flare fitting or CSST fitting. A technician completes a repair, goes down several flights of stairs to the manifold and turns the gas back on. In the 30 to 40 seconds it takes to return to the upper level appliance location, considerable gas has leaked into the location. Upon discovery of the leak, the technician must return to the manifold to shut the gas off. If there is an ignition source in the area, such as another gas appliance, with gas leaking for 80 seconds or more, the possibility of a catastrophic fire or explosion is real.

The Rocky Mountain Gas Association of Utah Board of Directors unanimously agrees that this change to the 2009 IFGC is dangerous, and strongly supports this Code Change.

Consider a gas furnace is located in an attic of a two story home, which requires a ladder to access the attic, and the gas manifold with the shut-off valves located in the basement of the home. A service technician will often need to turn the gas off to the furnace, at a valve prior to the control valve inside the furnace. It is unreasonable to consider it *convenient* for the technician to go back to the attic access, down a ladder, down stairs to the main level, then down stairs again to the basement level, to the manifold, to turn the gas off. The shut-off valve is located within 50', however there is nothing convenient when needing to turn the gas off and then back on.

To place a new furnace in operation the gas may need to be shut off and turned on five or more times. Consider this sequence followed by a gas furnace service technician who has been dispatched to perform a start-up/adjustment on a new furnace located in the attic:

- One of the first steps is to check the input gas pressure. The 1/8th inch pipe thread test port for testing is located on the inlet side of the control valve in the furnace. The technician makes a trip down to the manifold, turns off the gas, and then returns to the attic.
- The plug is removed from the test port and the threaded adapter, hose and test gauge is connected. The tech then goes back down to the manifold in the basement to turn the gas on. He/she then goes back to the attic.
- The gas pressure is checked in the attic to insure it is within the required range. Adjustments as required are made. The tech then goes back to the basement to turn the gas off, and then returns back to the attic. The pressure testing gauge is removed and the plug re-installed in the control valve.
- The next step is to check the manifold pressure, on the outlet of the control valve. Another trip to the basement to turn the gas back on. The plug on the outlet/manifold side of the control valve can be isolated from the gas supply by operating the valve on the control valve.
- The manifold pressure is then checked with the furnace operating. The pressure is adjusted at the control valve as necessary. If the geographical location is several thousand feet above sea level, and/or if the heat content value for the gas supplied to the home is less than or more than 1000 BTU/cubic foot (for natural gas), the gas burner orifices typically must be changed to provide a clean complete combustion process.
- The tech goes back to the basement, turns off the gas, then back to the attic.
- The gas control valve manifold assembly is removed from the furnace, the orifices are changed, the manifold re-installed.

- The tech goes back to the basement and turns the gas back on, then back to the attic to test for leaks. He/she then checks the manifold pressure, clocks the meter, assuring the furnace is fired at the correct rate.
- The count is 5 round trips from the attic, down through the upper and main levels to the basement. This is a typical procedure. The following also must be considered:
- If there is a leak in the pressure testing equipment or the re-assembled gas fittings during the start up procedure, considerable gas may escape while the tech travels from the basement, to the attic, realizes there is a leak, returns to the basement and turns the gas back off.
 - Problems discovered while performing this procedure may add even more trips to the process.
 - Whenever a long fuel gas line is opened, air enters the open line. The tech must then bleed the air out before the equipment will fire.
 - No one would ever consider placing an electrical disconnect switch where it was not readily accessible, in a basement with the furnace in the attic. Why are we allowing this with gas appliances?

Final Action: AS AM AMPC_____ D

FG25-09/10
202 (New), 410.4 (New)

Proposed Change as Submitted

Proponent: Sidney Cavanaugh, Cavanaugh Consulting, representing Brass Craft.

1. Add new text as follows:

410.4 Excess Flow Valve. Where automatic excess flow valves are installed, they shall be listed as complying with ANSI Z21.93/CSA 6.30 and shall be sized and installed in accordance with the manufacturer’s installation instructions.

2. Add new definition as follows:

SECTION 202

EXCESS FLOW VALVE. A valve designed to activate when the fuel gas passing through it exceeds a prescribed flow rate.

3. Add new standard to Chapter 8 as follows:

ANSI/CSA

ANSI Z21.93/CSA 6.30-XX Excess Flow Valves for Natural and LP Gas Up to Pressures of 5 Psi.

Reason: These devices increase the protection of health and safety of consumers and meet appropriate standards CSA 3-92 and ANSI Z21.93- CSA 6.30. The code change provides guidance to installations that are already occurring in many local jurisdictions for EFVs which can be used on low pressure fuel lines to prevent the open flow of gas in the event of a pipe disconnect or rupture. It is a companion to other code changes. Similar wording has been adopted in the UPC, UMC and the NFGC/NFPA 42 ANSI Z223.1.

Cost Impact: Minimal.

Analysis: A review of the standard(s) proposed for inclusion in the code, ANSI Z21.93/CSA 6.30-xx, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before September 24, 2009.

ICCFILENAME: CAVANAUGH-FG2-202_410.4

Public Hearing Results

Note: The following analysis was not in the Code Change monograph but was published on the ICC website at <http://www.iccsafe.org/cs/codes/Documents/2009-10cycle/ProposedChanges/Standards-Analysis.pdf> :

Analysis: The standard was not submitted for review.

Committee Action:

Disapproved

Committee Reason: The proposed standard is not yet published and available.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Sidney Cavanaugh representing Brass Craft, requests Approval as Submitted.

Commenter's Reason: The proposal was denied because the standard was not completed but it is hopeful that it will be by the public hearings in May.

Final Action: AS AM AMPC____ D

FG30-09/10 202, 603.1, Chapter 8

Proposed Change as Submitted

Proponent: James Ranfone representing American Gas Association

1. Revise definition as follows:

SECTION 202

LOG-LIGHTER FIREPLACE ACCESSORY DEVICE. A manually operated solid fuel ignition appliance fireplace accessory device for installation installed in a vented solid fuel-burning fireplace and used to ignite the solid fuel.

2. Revise text as follows:

603.1 General. Log lighters fireplace accessory devices shall be approved ~~tested in accordance with CSA-8~~ and shall be installed in accordance with the manufacturer's installation instructions.

3. Delete standard in Chapter 8 as follows:

CSA

CSA 8-93 ~~Requirements for Gas-fired Log Lighters for Wood-Burning Fireplaces — with Revisions through January 1999~~

Reason: The following reasons support the proposed revised coverage for log lighters:

CSA Requirement No. 8 covering log lighters was withdrawn on January 1, 2009.

The definition is being revised since a log lighter is more typically viewed as a fireplace accessory then an appliance.

The revisions to section 608.1 allows for the installation of an unlisted log lighter fireplace accessory when approved by the code official.

While section 105.2 can be used to approve these accessories, specific coverage in 608.1 is being proposed since unlisted log lighters

are the only types available. The accessory's inherent simplicity is the reason for the lack of listing and the withdrawal of the CSA

requirement. A typical log lighter is an iron pipe with drilled holes and shut off valve. They can be constructed on site from readily

available materials or are available from small fabricators as complete units or kits. There is a lack of a mass market demand and thus the

market is supplied by small fabricators.

Cost Impact: The code change proposal will not increase the cost of construction.

RANFONE-FG9-603.1_202.DOC

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: CSA 8 was withdrawn without replacement. Only the control valves were listed in the past. The proposed text provides code official guidance by accurately describing these devices.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Richard Grace representing Virginia Plumbing and Mechanical Inspectors Association (VPMIA), Virginia Building Code Officials Association (VBCOA), ICC Region VII, requests Approval as Modified by this Public Comment.

Replace the proposal as follows:

603.1 General. Log lighters shall be listed and labeled ~~tested in accordance with CSA-8~~ and installed in accordance with the manufacturer's installation instructions.

CSA

~~CSA 8-93 Requirements for Gas-fired Log Lighters for Wood-Burning Fireplaces — with Revisions through January 1999~~

Commenter's Reason: These devices are appropriately defined as appliances in accordance with the current definition. The commenter mentions the simplicity of the device...yes, they are typically nothing more than a steel pipe with holes drilled in them that allow gas to escape uncontrollably in a fireplace, and then a small igniter creates ignition to get a fire started. Contrary to the original submitter's published comments, this is definitely not a simple device in fact quite the opposite it is a dangerous device. There are other methods that have worked well for years and years such as paper and matches. If the Standard has been withdrawn, the appliances cannot be listed and labeled, therefore, it cannot be installed until a standard or new testing criteria are developed. Section 301.states that all appliances shall be listed and labeled, the revised language originally proposed makes that very difficult to achieve.

Public Comment 2:

Robert Adkins representing VPMIA/VBCOA, requests Disapproval.

Commenter's Reason: A "log lighter" is by definition an appliance and should be treated as such. "APPLIANCE. Any apparatus or device that utilizes gas as a fuel or raw material to produce light, heat, power, refrigeration or *air conditioning*." Without proper testing and approval there is no way to determine the potential risks and dangers of an installation.

Final Action: AS AM AMPC____ D

FG32-09/10, Part I

618.5

Proposed Change as Submitted

Proponent: Guy McMann, Jefferson County, Colorado, representing Colorado Association of Plumbing and Mechanicals (CAPMO)

PART I- IFGC

Revise as follows:

618.5 Prohibited sources. ~~Outside~~ Outdoor or return air for forced-air heating and cooling systems shall not be taken from the following locations:

1. Closer than 10 feet (3048 mm) from an *appliance* vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outside air inlet.
2. Where there is the presence of objectionable odors, fumes or flammable vapors; or where located less than 10 feet (3048 mm) above the surface of any abutting public way or driveway; or where located at grade level by a sidewalk, street, alley or driveway.
3. A hazardous or insanitary location or a refrigeration machinery room as defined in the *International Mechanical Code*.
4. A room or space, the volume of which is less than 25 percent of the entire volume served by such system. Where connected by a permanent opening having an area sized in accordance with Section 618.2, adjoining

rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of such rooms or spaces.

Exception: The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to such room or space.

5. A room or space containing an *appliance* where such a room or space serves as the sole source of return air.

Exception: This shall not apply where:

1. The *appliance* is a direct-vent *appliance* or an *appliance* not requiring a vent in accordance with Section 501.8.
 2. The room or space complies with the following requirements:
 - 2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6L/W) of combined input rating of all fuel-burning appliances therein.
 - 2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
 - 2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner appliance firebox or draft hood in the same room or space.
 3. Rooms or spaces containing solid fuel-burning appliances, provided that return-air inlets are located not less than 10 feet (3048 mm) from the firebox of such appliances.
6. A closet, bathroom, toilet room, kitchen, garage, ~~mechanical room~~, boiler room, furnace room or unconditioned attic.

Exceptions:

1. Where return air intakes are located not less than 10 feet (3048 mm) from cooking appliances and serve only the kitchen area, taking return air from a kitchen area shall not be prohibited.
 2. Dedicated forced air systems serving only a garage shall not be prohibited from obtaining return air from the garage.
7. A crawl space by means of direct connection to the return side of a forced-air system. Transfer openings in the crawl space enclosure shall not be prohibited.

Reason: The definition of “mechanical room” states that there are no fuel fired appliances located in the space, therefore pulling air thru one should not be an issue. This section precludes pulling return air from a garage but doesn’t recognize a dedicated garage system where doing so is perfectly acceptable. Adding the word “atmospheric” differentiates between open and closed combustion chambers.

Cost Impact: The code change proposal will not increase the cost of construction.

MCMANN-FG2-618.5.DOC:

Public Hearing Results

PART I- IFGC

Committee Action:

Modify the proposal as follows:

Approved as Modified

618.5 Prohibited sources. Outdoor or return air for a forced-air heating system shall not be taken from the following locations:

1. Closer than 10 feet (3048 mm) from an *appliance* vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outside air inlet.
2. Where there is the presence of objectionable odors, fumes or flammable vapors; or where located less than 10 feet (3048 mm) above the surface of any abutting public way or driveway; or where located at grade level by a sidewalk, street, alley or driveway.
3. A hazardous or insanitary location or a refrigeration machinery room as defined in the *International Mechanical Code*.
4. A room or space, the volume of which is less than 25 percent of the entire volume served by such system. Where connected by a permanent opening having an area sized in accordance with Section 618.2, adjoining rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of such rooms or spaces.

Exception: The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to such room or space.

5. A room or space containing an *appliance* where such a room or space serves as the sole source of return air.

Exception: This shall not apply where:

1. The *appliance* is a direct-vent *appliance* or an *appliance* not requiring a vent in accordance with Section 501.8.
 2. The room or space complies with the following requirements:
 - 2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6L/W) of combined input rating of all fuel-burning appliances therein.
 - 2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
 - 2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner *appliance* in the same room or space.
 3. Rooms or spaces containing solid fuel-burning appliances, provided that return-air inlets are located not less than 10 feet (3048 mm) from the firebox of such appliances.
6. A closet, bathroom, toilet room, kitchen, garage, mechanical room, boiler room, furnace room or unconditioned attic.

Exceptions:

1. Where return air intakes are located not less than 10 feet (3048 mm) from cooking appliances and serve only the kitchen area, taking return air from a kitchen area shall not be prohibited.
 2. ~~Dedicated~~ Forced air heating systems serving only a garage. ~~shall not be prohibited from obtaining return air from the garage.~~
7. A crawl space by means of direct connection to the return side of a forced-air system. Transfer openings in the crawl space enclosure shall not be prohibited.

Committee Reason: Current text unintentionally prohibits the taking of return air from a garage for a system that serves only a garage. Substituting "atmospheric burner" for "appliance firebox" differentiates between open and sealed combustion chamber appliances. The modification maintains the prohibition on taking return from a mechanical room and simplifies the proposed second exception.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Guy McMann representing Colorado Association of Plumbing and Mechanical Officials (CAPMO), requests Approval as Modified by this Public Comment.

Modify the proposal as follows

618.5 Prohibited sources. Outdoor or return air for forced-air heating and cooling systems shall not be taken from the following locations:

1. Closer than 10 feet (3048 mm) from an *appliance* vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outside air inlet.
2. Where there is the presence of objectionable odors, fumes or flammable vapors; or where located less than 10 feet (3048 mm) above the surface of any abutting public way or driveway; or where located at grade level by a sidewalk, street, alley or driveway.
3. A hazardous or insanitary location or a refrigeration machinery room as defined in the *International Mechanical Code*.
4. A room or space, the volume of which is less than 25 percent of the entire volume served by such system. Where connected by a permanent opening having an area sized in accordance with Section 618.2, adjoining rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of such rooms or spaces.

Exception: The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to such room or space.

5. A room or space containing an *appliance* where such a room or space serves as the sole source of return air.

Exception: This shall not apply where:

1. The *appliance* is a direct-vent *appliance* or an *appliance* not requiring a vent in accordance with Section 501.8.
 2. The room or space complies with the following requirements:
 - 2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6L/W) of combined input rating of all fuel-burning appliances therein.
 - 2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
 - 2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner *appliance* in the same room or space.
 3. Rooms or spaces containing solid fuel-burning appliances, provided that return-air inlets are located not less than 10 feet (3048 mm) from the firebox of such appliances.
6. A closet, bathroom, toilet room, kitchen, garage, ~~mechanical room~~, boiler room, furnace room or unconditioned attic.

Exceptions:

1. Where return air intakes are located not less than 10 feet (3048 mm) from cooking appliances and serve only the kitchen area, taking return air from a kitchen area shall not be prohibited.
 2. Dedicated Forced air heating systems serving only a garage. shall not be prohibited from obtaining return air from the garage.
7. A crawl space by means of direct connection to the return side of a forced-air system. Transfer openings in the crawl space enclosure shall not be prohibited.

Commenter's Reason: Although this was approved as modified it would be best that mechanical rooms are excluded as the code clearly permits them to be used as a plenum. Also, the committee offered a modification which mentions heating systems in Section 618.6 Item # 6, Exception # 2. This inadvertently leaves out cooling systems which was included in the original text. This modification essentially returns the proposal to what it was as originally submitted, and revises the main section to recognize that both heating and cooling systems should be addressed as they are in the IRC.

Final Action: AS AM AMPC____ D

FG32-09/10, Part II

IMC 918.6

Proposed Change as Submitted

Proponent: Guy McMann, Jefferson County, Colorado, representing Colorado Association of Plumbing and Mechanicals (CAPMO)

PART II- IMC

Revise as follows:

918.6 Prohibited sources. Outdoor or return air for forced-air heating and cooling systems shall not be taken from the following locations:

1. Less than 10 feet (3048 mm) from an *appliance* vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outdoor air inlet.
2. Where there is the presence of objectionable odors, fumes or flammable vapors; or where located less than 10 feet (3048 mm) above the surface of any abutting public way or driveway; or where located at grade level by a sidewalk, street, alley or driveway.
3. A hazardous or insanitary location or a refrigeration *machinery room* as defined in this code.
4. A room or space, the volume of which is less than 25 percent of the entire volume served by such system. Where connected by a permanent opening having an area sized in accordance with Sections 918.2 and 918.3, adjoining rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of such rooms or spaces.

Exception: The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to such room or space.

5. A closet, bathroom, toilet room, kitchen, garage, ~~mechanical room~~, boiler room, furnace room or unconditioned attic.

Exceptions:

- 5.1. Where return air intakes are located not less than 10 feet (3048 mm) from cooking appliances, and serve the kitchen area only, taking return air from a kitchen shall not be prohibited.
- 5.2. Dedicated forced air systems serving only a garage shall not be prohibited from obtaining return air from the garage.

6. An unconditioned crawl space by means of direct connection to the return side of a forced air system. Transfer openings in the crawl space enclosure shall not be prohibited.
7. A room or space containing a fuel-burning *appliance* where such room or space serves as the sole source of return air.

Exceptions:

- 7.1. This shall not apply where the fuel-burning *appliance* is a direct-vent *appliance*.
- 7.2. This shall not apply where the room or space complies with the following requirements:
 - 7.2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6 L/W) of combined input rating of all fuel-burning appliances therein.
 - 7.2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
 - 7.2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner appliance firebox or draft hood in the same room or space.
- 7.3. This shall not apply to rooms or spaces containing solid-fuel-burning appliances, provided that return-air inlets are located not less than 10 feet (3048 mm) from the firebox of the appliances.

Reason: The definition of "mechanical room" states that there are no fuel fired appliances located in the space, therefore pulling air thru one should not be an issue. This section precludes pulling return air from a garage but doesn't recognize a dedicated garage system where doing so is perfectly acceptable. Adding the word "atmospheric" differentiates between open and closed combustion chambers.

Cost Impact: The code change proposal will not increase the cost of construction.

MCMANN-FG2-618.5.DOC:

Public Hearing Results

PART II- IMC

Committee Action:

Approved as Modified

Modify the proposal as follows:

918.6 Prohibited sources. Outdoor or return air for a forced-air heating system shall not be taken from the following locations:

- 1. Less than 10 feet (3048 mm) from an *appliance* vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outdoor air inlet.
- 2. Where there is the presence of objectionable odors, fumes or flammable vapors; or where located less than 10 feet (3048 mm) above the surface of any abutting public way or driveway; or where located at grade level by a sidewalk, street, alley or driveway.
- 3. A hazardous or insanitary location or a refrigeration *machinery room* as defined in this code.
- 4. A room or space, the volume of which is less than 25 percent of the entire volume served by such system. Where connected by a permanent opening having an area sized in accordance with Sections 918.2 and 918.3, adjoining rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of such rooms or spaces.

Exception: The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to such room or space.

- 5. A closet, bathroom, toilet room, kitchen, garage, mechanical room, boiler room, furnace room or unconditioned attic.

Exceptions:

- 5.1. Where return air intakes are located not less than 10 feet (3048 mm) from cooking appliances, and serve the kitchen area only, taking return air from a kitchen shall not be prohibited.
- 5.2. ~~Dedicated Forced air heating systems serving only a garage. shall not be prohibited from obtaining return air from the garage~~
- 6. An unconditioned crawl space by means of direct connection to the return side of a forced air system. Transfer openings in the crawl space enclosure shall not be prohibited.
- 7. A room or space containing a fuel-burning *appliance* where such room or space serves as the sole source of return air.

Exceptions:

- 7.1. This shall not apply where the fuel-burning *appliance* is a direct-vent *appliance*.
- 7.2. This shall not apply where the room or space complies with the following requirements:
 - 7.2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6 L/W) of combined input rating of all fuel-burning appliances therein.
 - 7.2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
 - 7.2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner *appliance* in the same room or space.
- 7.3. This shall not apply to rooms or spaces containing solid-fuel-burning appliances, provided that return-air inlets are located not less than 10 feet (3048 mm) from the firebox of the appliances.

Committee Reason: The reason is the same as given for FG32-09/10 Part I.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Guy McMann representing Colorado Association of Plumbing and Mechanical Officials (CAPMO), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

918.6 Prohibited sources. Outdoor or return air for forced-air heating and cooling systems shall not be taken from the following locations:

1. Less than 10 feet (3048 mm) from an *appliance* vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outdoor air inlet.
2. Where there is the presence of objectionable odors, fumes or flammable vapors; or where located less than 10 feet (3048 mm) above the surface of any abutting public way or driveway; or where located at grade level by a sidewalk, street, alley or driveway.
3. A hazardous or insanitary location or a refrigeration *machinery room* as defined in this code.
4. A room or space, the volume of which is less than 25 percent of the entire volume served by such system. Where connected by a permanent opening having an area sized in accordance with Sections 918.2 and 918.3, adjoining rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of such rooms or spaces.

Exception: The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to such room or space.

5. A closet, bathroom, toilet room, kitchen, garage, ~~mechanical room~~, boiler room, furnace room or unconditioned attic.

Exceptions:

- 5.1. Where return air intakes are located not less than 10 feet (3048 mm) from cooking appliances, and serve the kitchen area only, taking return air from a kitchen shall not be prohibited.
- 5.2. Dedicated Forced air heating systems serving only a garage. shall not be prohibited from obtaining return air from the garage
6. An unconditioned crawl space by means of direct connection to the return side of a forced air system. Transfer openings in the crawl space enclosure shall not be prohibited.
7. A room or space containing a fuel-burning *appliance* where such room or space serves as the sole source of return air.

Exceptions:

- 7.1. This shall not apply where the fuel-burning *appliance* is a direct-vent *appliance*.
- 7.2. This shall not apply where the room or space complies with the following requirements:
 - 7.2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6 L/W) of combined input rating of all fuel-burning appliances therein.
 - 7.2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
 - 7.2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner *appliance* in the same room or space.
- 7.3. This shall not apply to rooms or spaces containing solid-fuel-burning appliances, provided that return-air inlets are located not less than 10 feet (3048 mm) from the firebox of the appliances.

Commenter's Reason: See FG32-09/10, Part I

Final Action: AS AM AMPC____ D

FG32-09/10, Part III IRC M1602.2

Proposed Change as Submitted

Proponent: Guy McMann, Jefferson County, Colorado, representing Colorado Association of Plumbing and Mechanicals (CAPMO)

PART III- IRC

M1602.2 Prohibited sources. Outdoor and return air for a forced-air heating or cooling system shall not be taken from the following locations:

1. Closer than 10 feet (3048 mm) to an *appliance* vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outside air inlet.
2. Where flammable vapors are present; or where located less than 10 feet (3048 mm) above the surface of any abutting public way or driveway; or where located at grade level by a sidewalk, street, alley or driveway.
3. A room or space, the volume of which is less than 25 percent of the entire volume served by the system. Where connected by a permanent opening having an area sized in accordance with ACCA Manual D, adjoining rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of the rooms or spaces.

Exception: The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to the room or space.

4. A closet, bathroom, toilet room, kitchen, garage, ~~mechanical room~~, boiler room, furnace room, unconditioned *attic* or other *dwelling unit*.

Exception: Dedicated forced air systems serving only a garage shall not be prohibited from obtaining return air from the garage.

5. A room or space containing a fuel-burning *appliance* where such room or space serves as the sole source of return air.

Exceptions:

1. The fuel-burning *appliance* is a direct-vent *appliance* or an *appliance* not requiring a vent in accordance with Section M1801.1 or Chapter 24.
2. The room or space complies with the following requirements:
 - 2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6 L/W) of combined input rating of all fuel-burning *appliances* therein.
 - 2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
 - 2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner *appliance* firebox or draft hood in the same room or space.
3. Rooms or spaces containing solid-fuel burning *appliances*, if return-air inlets are located not less than 10 feet (3048 mm) from the firebox of those *appliances*.
6. An unconditioned crawl space by means of direct connection to the return side of a forced air system. Transfer openings in the crawl space enclosure shall not be prohibited.

Reason: The definition of “mechanical room” states that there are no fuel fired appliances located in the space, therefore pulling air thru one should not be an issue. This section precludes pulling return air from a garage but doesn’t recognize a dedicated garage system where doing so is perfectly acceptable. Adding the word “atmospheric” differentiates between open and closed combustion chambers.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

PART III-IRC-M

Committee Action:

Approved as Modified

Modify the proposal as follows:

M1602.2 Prohibited sources. Outdoor and return air for a forced-air heating or cooling system shall not be taken from the following locations:

1. Closer than 10 feet (3048 mm) to an *appliance* vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outside air inlet.
2. Where flammable vapors are present; or where located less than 10 feet (3048 mm) above the surface of any abutting public way or driveway; or where located at grade level by a sidewalk, street, alley or driveway.

3. A room or space, the volume of which is less than 25 percent of the entire volume served by the system. Where connected by a permanent opening having an area sized in accordance with ACCA Manual D, adjoining rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of the rooms or spaces.

Exception: The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to the room or space.

4. A closet, bathroom, toilet room, kitchen, garage, mechanical room, boiler room, furnace room, unconditioned *attic* or other *dwelling unit*.

Exception: Dedicated forced air systems serving only a garage shall not be prohibited from obtaining return air from the garage.

5. A room or space containing a fuel-burning *appliance* where such room or space serves as the sole source of return air.

Exceptions:

1. The fuel-burning *appliance* is a direct-vent *appliance* or an *appliance* not requiring a vent in accordance with Section M1801.1 or Chapter 24.
2. The room or space complies with the following requirements:
 - 2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6 L/W) of combined input rating of all fuel-burning *appliances* therein.
 - 2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
 - 2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner *appliance* in the same room or space.
3. Rooms or spaces containing solid-fuel burning *appliances*, if return-air inlets are located not less than 10 feet (3048 mm) from the firebox of those *appliances*.

6. An unconditioned crawl space by means of direct connection to the return side of a forced air system. Transfer openings in the crawl space enclosure shall not be prohibited.

Committee Reason: The reason is the same as given for FG32-09/10 Part I.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Guy McMann representing Colorado Association of Plumbing and Mechanical Officials (CAPMO), requests Approval as Submitted.

Commenter's Reason: Although this was approved as submitted it would be best that mechanical rooms be excluded as the code clearly permits mechanical rooms to be used as plenums.

Final Action: AS AM AMPC_____ D

FG33-09/10
621.2, 621.4

Proposed Change as Submitted

Proponent: Craig Conner, Building Quality representing self.

1. Delete without substitution.

~~**621.2 Prohibited use.** One or more unvented room heaters shall not be used as the sole source of comfort heating in a dwelling unit.~~

2. Revise as follows:

621.4 Prohibited locations. Unvented room heaters shall not be installed within occupancies in Groups A, E and I and shall not be installed within dwelling units. The location of unvented room heaters shall also comply with Section

Reason: This proposal prohibits unvented gas room heaters in residences. Energy efficiency in buildings is becoming increasingly important. Reduced air infiltration from airtight new buildings is a key part of making buildings more energy efficient. Obviously all products of combustion from these heaters are vented directly into the building, including venting moisture and nitrous oxides. Airtight residences are not compatible with unvented room heaters.

The 2009 IRC and IECC were made significantly more energy efficient in the last code cycle. The added efficiency included a requirement for an air tightness inspection or an air tightness test (IRC N1102.4.2, IECC 402.4.2). Incoming code changes by multiple parties are likely to greatly increase residential air tightness. There may even be a Federal law requiring increased energy efficiency in energy codes, with the prospect of a "Federalized energy code" if there is not a substantial increase in IECC energy efficiency. The increased energy efficiency in the IRC and IECC is not compatible with unvented room heaters.

Manufacturers are pushing unvented heaters to provide a greater portion of the heating for residences. Unvented heaters are called the most efficient form of heating or touted as 99% efficient. Although they legalistically including the word "supplemental" in most literature, unvented heater manufacturers focus on encouraging unvented heaters as zone or room heaters. Manufacturers or their representatives, such as the Vent-Free Alliance, even suggest lowering the thermostat of the central heating system so that more space heating is provided by the unvented heater. Greater use of unvented heaters means increased venting of combustion products directly into the living space.

The addition of vents to room heaters and fireplaces solves the problem. The most effective strategy for limiting indoor pollutants and moisture is to prevent them from being released inside in the first place, which is a key principal of indoor air quality. For room heaters and fireplaces this means exhausting the combustion products outside. Diluting the combustion products by venting the whole house is an energy-wasteful way of dealing with combustion products. Over ventilation of the residence on the possibility that an unvented heater might be in some part of the home, or might be added at a future date, is especially wasteful of energy.

So where is the evidence of a problem? The best evidence of a problem is the programs, standards, and companies "voting with their feet". ICC's new National Green Building Standard (ICC-700) outright disqualifies a residence with an unvented heater from a green designation at any level. Similarly, Energy Star, LEED and the American Lung Association's Health House outright prohibit unvented heaters in any residence in their programs. Unvented room heaters are not "green", they are "brown".

Likewise codes and standards are singling out unvented heaters. The 2009 IRC and IECC require homes with unvented heaters to state "gas-fired unvented room heater" as part of the energy certificate required to be posted on each residence (IRC N1101.9, IECC 401.3). To prevent claims of high efficiency heating, the IRC and IECC prohibit listing an efficiency for unvented heaters on the energy certificate. ASHRAE 62.2, the standard for residential indoor air quality, does not even apply in residences with unvented heaters (see scope section).

Unvented heaters are prohibited in new manufactured (HUD-code) homes by both HUD's Manufactured Home Construction and Safety Standards (Section 3280.707) and NFPA 501, the "Standard for Mobile Homes". NFPA 501, Section 10.6 states:

"Fuel-burning, heat-producing appliances and refrigeration appliances shall be of the vented type and shall vent to the outside. Exception: Ranges and ovens."

In spite of HUD and NFPA 501's regulation, unvented heaters are often sold for use in existing manufactured homes. The I-codes should not allow heating combustion products to be vented directly into an existing manufactured, as those homes were never designed to accommodate a heater's combustion products.

The trend among manufacturers is clear- several companies refuse to make unvented heaters (Hearth & Home Technologies, Jotul, Kozy Heat Fireplaces, Mendota Fireplaces, Travis Industries), including the largest maker of fireplaces and hearth products. Recently Renni went from being a Vent-Free Alliance member to not producing unvented heaters.

Unvented gas room heaters are an impediment to greater energy efficiency. Unvented gas room heaters do not belong in residences.

Cost Impact: This code change proposal will increase the cost of construction.

CONNOR-FG1-621.2.DOC:

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: No evidence was presented to prove that any harm is caused by these appliances. No evidence was presented to show that houses are excessively tight such that problems will result with the installation of these appliances.

Assembly Action:

None

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Craig Conner, Building Quality, representing self, requests Approval as Submitted.

Commenter's Reason: Unvented room heaters produce water as a product of combustion. Water can be produced at a rate of between a cup and almost two quarts per hour of operation. Power humidifiers have similar rates of moisture production.

Unvented heaters are power humidifiers with out any humidity control. The simple addition of a vent to vent moisture outside removes the problem. Why would anyone put a power humidifier without controls into a new, tight, energy-efficient residence?

Public Comment 2:

Tim Manz representing Association of Minnesota Building Officials (AMBO), requests Approval as Submitted.

Commenter's Reason: The Minnesota Mechanical Code and NFPA 501, "Standard on Manufactured Housing" both prohibit unvented heaters due to the products of combustion and moisture that are generated during the combustion process, since there is no effective way to remove these contaminants from inside the structure when a venting system does not exist.

Public Comment 3:

Patrick A. McLaughlin, McLaughlin & Associates, representing The Air-Conditioning, Heating and Refrigeration Institute, requests Disapproval.

Commenter's Reason: The Air-Conditioning, Heating and Refrigeration Institute (AHRI) is the trade association representing more than 300 manufacturers of air conditioning, heating and commercial refrigeration equipment. Our product categories include many types of vented and unvented gas residential heating appliances.

AHRI endorses the judgment of the International Fuel Gas Code Committee in its unanimous disapproval of proposal FG33.

Unvented room heaters possess the highest energy efficiency of any gas appliance, providing consumers with comfort and warmth while saving energy and money. The federal government exempts them from energy labeling and higher efficiency targets, since it recognizes that they already perform at the highest achievable level.

The requirements for ventilation and combustion air are exactly the same as for vented gas appliances. As homes become tighter, unvented room heaters perform better with diminishing heat demand, and they include unique combustion control and gas control that provide extra safety for such conditions.

Independent, peer-reviewed scientific research performed by Gas Research Institute, AGA Research, Arthur D. Little, Wilson Environmental, and Risksciences have documented the acceptable indoor air quality (IAQ) performance of unvented room heaters through actual field testing and verified computer modeling, including the utilization of the Environmental Protection Agency's IAQ modeling platform.

With 20 million units installed over the last 30 years, unvented room heaters have a remarkable safety record compared to other gas appliance. They are certified by independent third-parties such as CSA and Underwriters Laboratories (UL) in accordance with the national product standard, ANSI Z21.11.2, for safety, performance, and construction.

Unvented room heaters have been allowed by ICC codes since the first editions were published. Over the years in state and local jurisdictions, the overall trend has been for acceptance based upon the safety record that has been achieved and health department evaluations that have been performed. They are recognized for green construction by the Naturally Green Natural Gas Home Program.

The national product standard, ANSI Z21.11.2, permits installation of unvented room heaters in site-located manufactured homes--an application acknowledged by the Manufactured Housing Institute.

Manufacturers of unvented room heaters also manufacture vented gas heating appliances, and they are highly knowledgeable on the acceptability of both technologies. A code should never be used to restrict consumer choice, especially for a proven appliance with such a remarkable history of safety, performance, and reliability.

Final Action: AS AM AMPC_____ D
