NFPA 54, 2018 National Fuel Gas Code SRS

1) NFPA 54 REVISION SUMMARY

This code is a safety code that for the installation of fuel gas piping systems. SRS adopted code edition of 2015 is compared with current edition of 2018 in this review.

2) SIGNIFICANT CHANGES

2015 Edition	2018 Edition	Comments
Chapter 5	**Gas Piping System Design, Materials, and Components**	
5.6.2.2 Steel and Wrought Iron. Steel and wrought-iron pipe shall be at least of standard weight (Schedule 40) and shall comply with one of the following standards: (1) ANSI/ASME B36.10M, *Welded and Seamless Wrought-Steel Pipe* (2) ASTM A 53, *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless* (3) ASTM A 106, *Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service*	**5.6.2.2 Steel, Stainless Steel, and Wrought Iron.** Steel, stainless steel, and wrought-iron pipe shall be at least Schedule 10 and shall comply with the dimensional standards of ANSI/ ASME B36.10M, *Welded and Seamless Wrought Steel Pipe,* and one of the following: (1) ASTM A53, *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless* (2) ASTM A106, *Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service* (3) ASTM A312, *Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes*	Not a significant change for SRS
5.6.7.1 Specifications for Pipe Threads. Metallic pipe and fitting threads shall be taper pipe threads and shall comply with ANSI/ASME B1.20.1, *Pipe Threads, General Purpose, Inch.*	**5.6.7.1* Pipe Joints.** Schedule 40 and heavier pipe joints shall be threaded, flanged, brazed, welded, or assembled with press connect fittings listed to ANSI LC 4/CSA 6.32, Press-Connect Metallic Fittings for Use in Fuel Gas Distribution Systems. **(A)** Pipe lighter than Schedule 40 shall be connected using press-connect fittings, flanges, brazing, or welding	Not a significant change for SRS
Chapter 9	**Appliance, Equipment, and Accessory Installation**	
N/A	**9.1.24* Existing Appliances.** Existing appliance installations shall be inspected to verify compliance with the provisions of Section 9.3 and Chapter 12 where a component of the building envelope is modified as described by one or more of 9.1.24(1) through 9.1.24(6). Where the appliance installation does not comply with Section 9.3 and Chapter 12, the installation shall be altered as necessary to be in compliance with Section 9.3 and Chapter 12.	Not a significant change for SRS

<table>
<tr><th>Chapter 12</th><th colspan="2">Venting of Appliances</th></tr>
<tr><td>12.5.2 Plastic Piping. Where plastic piping is used to vent an appliance, the appliance shall be listed for use with such venting materials and the appliance manufacturer's installation instructions shall identify the specific plastic piping material.</td><td>12.5.2 Plastic Piping. Where plastic piping is used to vent an appliance, the appliance shall be listed for use with such venting materials and the appliance manufacturer's installation instructions shall identify the specific plastic piping material. The plastic pipe venting materials shall be labeled in accordance with the product standards specified by the appliance manufacturer or shall be listed and labeled in accordance with ANSI/UL 1738, Venting Systems for Gas-Burning Appliances, Categories II, III, and IV.</td><td>Not a significant change for SRS</td></tr>
<tr><td>12.9.3 The vent terminal of a direct vent appliance with an input of 10,000 Btu/hr (3 kW) or less shall be located at least 6 in. (150 mm) from any air opening into a building, an appliance with an input over 10,000 Btu/hr (3 kW) but not over 50,000 Btu/hr (14.7 kW) shall be installed with a 9 in. (230 mm) vent termination clearance, and an appliance with an input over 50,000 Btu/hr (14.7 kW) shall have at least a 12 in. (300 mm) vent termination clearance. The bottom of the vent terminal and the air intake shall be located at least 12 in. (300 mm) above finished ground level.</td><td>12.9.3 The clearances for through-the-wall direct vent terminals shall be in accordance with Table 12.9.3. The bottom of the vent terminal and the air intake shall be located not less than 12 in. (300 mm) above finished ground level.
Table 12.9.3 Through-the-Wall Direct Vent Termination Clearances.
<table><tr><th>Direct Vent Appliance Input Rating:</th><th>Through the Wall Vent Terminal Clearance from any Air Opening into a Building:</th></tr><tr><td>10,000 Btu/hr (3kW) and less</td><td>6 in. (150 mm)</td></tr><tr><td>Greater than 10,000 Btu/hr (3kW) and not exceeding 50,000 Btu/hr (14.7kW)</td><td>9 in. (230 mm)</td></tr><tr><td>Greater than 50,000 Btu/hr (14.7kW) and not exceeding 150,000 Btu/hr (29.4kW)</td><td>12 in. (300 mm)</td></tr><tr><td>> 150,000 Btu/hr (29.4kW)</td><td>In accordance with the appliance manufacturer's instructions and in no case less than the clearances specified in 12.9.2</td></tr></table></td><td>Not a significant change for SRS</td></tr>
</table>

3) COMMENTS

1. Will adoption of the new edition require additional funding or resources not currently in the scope?

   No, there are no retroactive design changes required.

2. Will adoption of the new edition require changes to procedures, manuals, programs, etc. to remain in compliance with the changes (generally part of doing business)?

   No, the current application of NFPA 54 requires direct application of the document.

3. Are there changes in methodologies, calculations, procedures, etc. that need to be communicated to a select group within the organization to ensure proper implementation, other than what is required for the above two questions?

   No, the current application of NFPA 54 requires direct application of the document.

4) REVIEW AND APPROVAL

Recommendation

The change to NFPA 54 2018 is recommended. NFPA 54 has very limited use at SRS, the identified changes in the 2018 Edition are not expected to be significant.

Title/Group	Name	Signature	Date
Originator Savannah River Nuclear Solutions	**George Rawls**	GB Rawls	9/4/18
Independent Technical Reviewer Savannah River Nuclear Solutions	**Tyler French**	T Tyler French	9-4-18