



**COLORADO SPRINGS FIRE DEPARTMENT**  
**Division of the Fire Marshal**  
**Administrative Ruling/Interpretation**

<b>Number:</b>	<b>2007-1</b>		
<b>Subject:</b>	<b>Single sprinkler head for cooling in compressed gas storage room</b>		
<b>Reference:</b>	<b>2009 IFC, 3006.2.1 &amp; 3006.2.2</b>		
<b>Effective Date:</b>	<b>5/1/07</b>	<b>Issued By:</b>	<b>Kay Yeager, HazMat Coordinator</b>
<b>Revision Date:</b>	<b>10/15/13</b>	<b>Revised By:</b>	<b>D. Withee, Fire Prot. Engr</b>
<b>Approval Date:</b>	<b>5/1/13</b>	<b>Approved By:</b>	<b>Brett T. Lacey</b>

**PURPOSE:** To clarify submittal and installation of fire sprinklers used solely for cylinder cooling of compressed gases.

**SCOPE:** Medical gas storage in an otherwise non-sprinklered building.

**DESCRIPTION OF ISSUE:** The International Fire Code requires a single sprinkler head in a medical gas cylinder storage/use room for cooling the cylinders only. The code does not indicate how to install this sprinkler head. An interpretation from ICC stated that the single head could come off the domestic water supply and that since it is a "limited area usage" the density would be determined by the hazard involved. NFPA was also contacted and stated that a single sprinkler head would not be considered a "system" and is not covered under the 2007 NFPA Standard 13 other than under "4.2.2 The authority having jurisdiction shall be consulted in each case".

**DECISION:** The ruling allows an exception relating to the required sprinkler head in a one-hour fire rated room for medical gas storage/use for cylinder cooling only. This exception allows a single ordinary temperature, quick response sprinkler head from the domestic water supply after the building's backflow preventer in non-sprinklered buildings where the room does not exceed 24 square feet. This line shall have a quarter turn isolation valve to facilitate changing the head. This valve must be chained and locked in the open position and be labeled indicating the valve function. For this sprinkler head configuration, no design area calculations or sprinkler reviews are required. A minimum temperature of 40<sup>0</sup> F must be maintained in this room and anywhere the water supply piping is run.