

Residential Fire Sprinkler Systems



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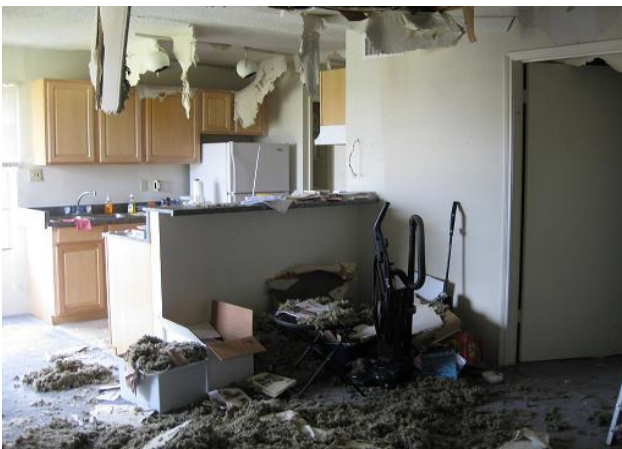
Loss Control Manager



History – A growing number of homes are being built or modified with residential automatic fire sprinkler systems. On January 1, 2011, the State of California has adopted building code changes that require all new one and two family homes and townhouses built in the state to be equipped with fire sprinkler systems.

Losses – During the past several years, a growing number of pest control operators throughout the U.S. have inadvertently broken or discharged residential fire sprinkler systems in attics causing hundreds of thousands and possibly millions of dollars in damage. These incidents are not just caused by WDO inspectors or crew, but also by pest control technicians performing inspections and vertebrate pest control. When these fire sprinkler pipes and fire sprinkler heads are broken the water damage can be significant.

Types of Water Damage – Water damage can come in many different forms and severity in the event that a fire sprinkler pipe or fire sprinkler head is inadvertently broken or in the event that a fire sprinkler head discharges.



Hazards - Residential fire sprinkler systems offer tremendous fire protection qualities for the homeowner, but they also pose a very real risk of property damage if the system is damaged. Recognize and understand the hazards.

1. Residential automatic fire sprinkler system plumbing running through attics are at risk of being broken by those working in attics.



2. There are thousands of pest control operator employees accessing attics to perform repairs daily, so the potential risk for an accident increases.

3. Residential fire sprinkler pipes are frequently unexpected, and they are made of fragile CPVC (chlorinated polyvinylchloride) pipes which can break easily.

4. The pipes can be hidden under insulation, and can be easily damaged.

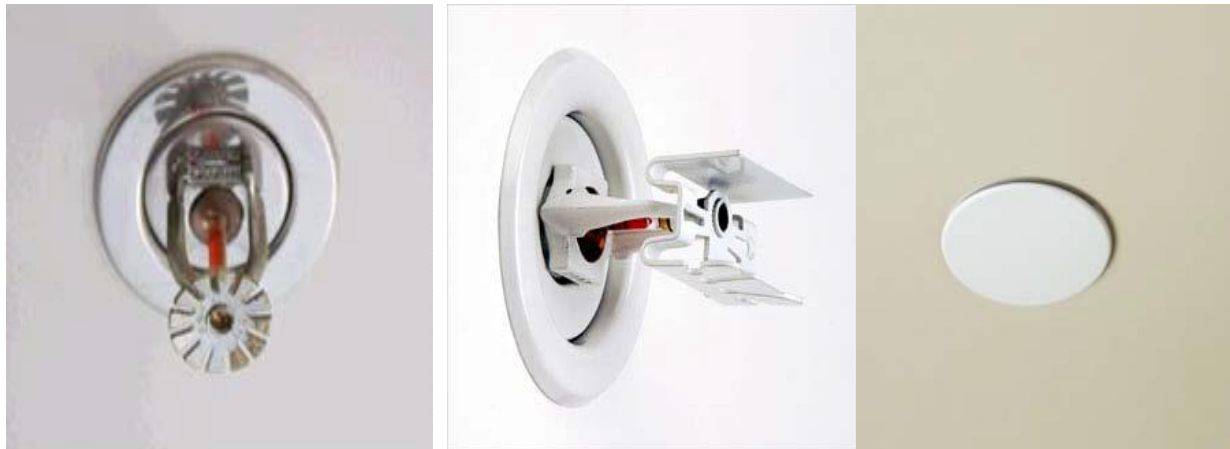


5. When these pipes are broken the water damage can be significant. The water shut-off valves are frequently locked up making it difficult to turn off the water in a timely manner resulting in further damage to the property.

6. Residential fire sprinkler pipe is also susceptible to damage from other activities such as demolition, and cutting into drywall when performing repairs.

Prevention – Once you recognize and understand the hazards of residential fire sprinkler systems, you can take steps to help prevent accidents.

1. Look for indicators of the presence of a residential fire sprinkler system prior to starting work by searching for fire sprinkler heads. They may be in ceilings, walls or on roof trusses in an attic, and they may be visible or hidden.



2. Although most of the automatic residential fire sprinkler pipes will frequently be orange, it is not always the case.



3. Look for the location of the automatic residential fire sprinkler control system riser (garage, laundry, closet, exterior) and identify where to go to shut-off the water should a fire sprinkler be pipe or head be broken.



4. Identify the location of the fire sprinkler piping and fire sprinkler heads before accessing and crawling around in an attic.

5. Have a safe route planned ahead of time before navigating your way through an attic. Know where you are going.

6. Do not put any weight or stress on any portion of the fire sprinkler piping or fire sprinkler heads.

7. Do not lean on or grab any fire sprinkler pipes, fire sprinkler heads or other components.

8. Use great care placing your feet and hands on structural members, so as not to put any pressure on any element of the fire sprinkler system which may be mounted to the beam.

9. Heat treatments can be hot enough to trigger the fire sprinkler heads (fire sprinkler heads can be activated anywhere from 135-170 degrees F) and pose a particular threat to the fire sprinkler system. Special care must be taken. Coordination needs to be made with the owner and a licensed fire sprinkler contractor to determine whether or not the fire sprinkler system should be disabled or to shield fire sprinkler heads. Policies, guidelines and a staff training program should be developed and put in place for the heat treatment system

being used to help ensure that the fire sprinkler system is not triggered or damaged during the process.



10. Provide confined space awareness staff training annually. This training should focus on the hazards of entering non-permit confined spaces like residential attics and the potential to damage pressurized water systems in attics, such as a fire sprinkler system.

11. Establish a corporate policy with customers that contractually states how you are going to handle the residential fire sprinkler system exposure. See examples below.

Sample Policy for Dealing with Attics With Sprinkler Systems or PEX

Sample Company Practice Policy

We do not enter attics equipped with a pressurized fire sprinkler system and/or a cross-linked polyethylene (PEX) pressurized water supply, unless the consumer employs a licensed C-16 fire-protection contractor and/or licensed C-36 plumbing contractor to drain and disable the pressurized system/s, before our employees or subcontractors can gain access to the attic for any inspections, repairs or treatments.

Sample Disclaimer Regarding Attics With Sprinkler Systems or PEX:

If your home is equipped with a pressurized fire sprinkler system and/or (PEX) polyethylene pressurized water supply system, you are advised to employ a licensed C-16 fire-protection contractor and/or licensed C-36 plumbing contractor to drain and disable the pressurized system/s before

our employees or subcontractors can gain access to the attic for any inspections, repairs or treatments. Due to the fragility of pressurized fire sprinkler system and/or (PEX) Polyethylene pressurized water supply systems we cannot accept responsibility for damage to the system that may be caused inadvertently by our activities in the attic. Your C-16 fire-protection contractor and/or licensed C-36 plumbing contractor will need to inspect and re-establish the system after we have finished the work you have hired us to do in the attic.

Sample WDO Findings and Recommendations: Attics With Sprinkler Systems or PEX:

Finding: The attic is inaccessible due to the installation of a residential fire sprinkler system and/or a (PEX) Polyethylene pressurized water supply system.

Recommendation: Due to the presence of a residential sprinkler system and/or a (PEX) Polyethylene pressurized water supply system, the attic could not be physically inspected. There are no visible signs of infection or infestation in adjacent areas of attic opening. We assume no responsibility for any infection, infestation or damage that may be present in inaccessible areas. If interested parties wish to have this area inspected, they are advised to employ a licensed C-16 fire-protection contractor and/or a licensed C-36 plumbing contractor to drain and disable the pressurized system/s prior to the scheduled supplemental inspection. We will list any adverse findings and recommendations and additional costs in a supplemental report. Due to the fragility of pressurized fire sprinkler system and/or (PEX) polyethylene pressurized water supply systems, we cannot accept responsibility for damage to the system that may be caused inadvertently by our activities in the attic. Your C-16 fire-protection contractor and/or licensed C-36 plumbing contractor will need to inspect and re-establish the system, after we have finished the work you have hired us to do in the attic.

Sample WDO Language When Damage Extends Into Attic (*Disable Fire Sprinklers/(PEX) water supply system*)

The structure is equipped with a pressurized fire sprinkler system and/or a (PEX) polyethylene pressurized water supply system. In order to complete the recommended repairs, or during the course of recommended repairs, it is necessary to access the attic. Before any employees can gain access, you will need to employ a licensed C-16 fire-protection contractor and/or a licensed C-36 plumbing contractor to drain and disable the supply system/s. We will list any adverse findings and recommendations and additional costs in a supplemental report.

Sources:

-Fire Sprinkler Hazards When Using Heat Technologies

www.pcoc.org/Summer2012

Eric R. Paulsen, CRM

Risk Manager, Clark Pest Control

-Hazards and Suggested Policies for Dealing with Residential Fire Sprinklers and Cross-Linked Polyethylene (PEX) Water Supply Systems

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Eric R Paulsen, CRM, CSP

Risk Manager, Clark Pest Control

-NFPA 13D Standard for Residential Fire Sprinkler Systems

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