



FCS

Facility Compliance Services LLC

NFPA 101 2012 COMPLIANCE

CHAPTER 19:

Existing Health Care
Occupancies

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Certified Fire Inspector I**

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop C2-21-16
Baltimore, Maryland 21244-1850



Center for Clinical Standards and Quality/Survey & Certification Group

Ref: S&C: 16-29-LSC

DATE: June 20, 2016

TO: State Survey Agency Directors

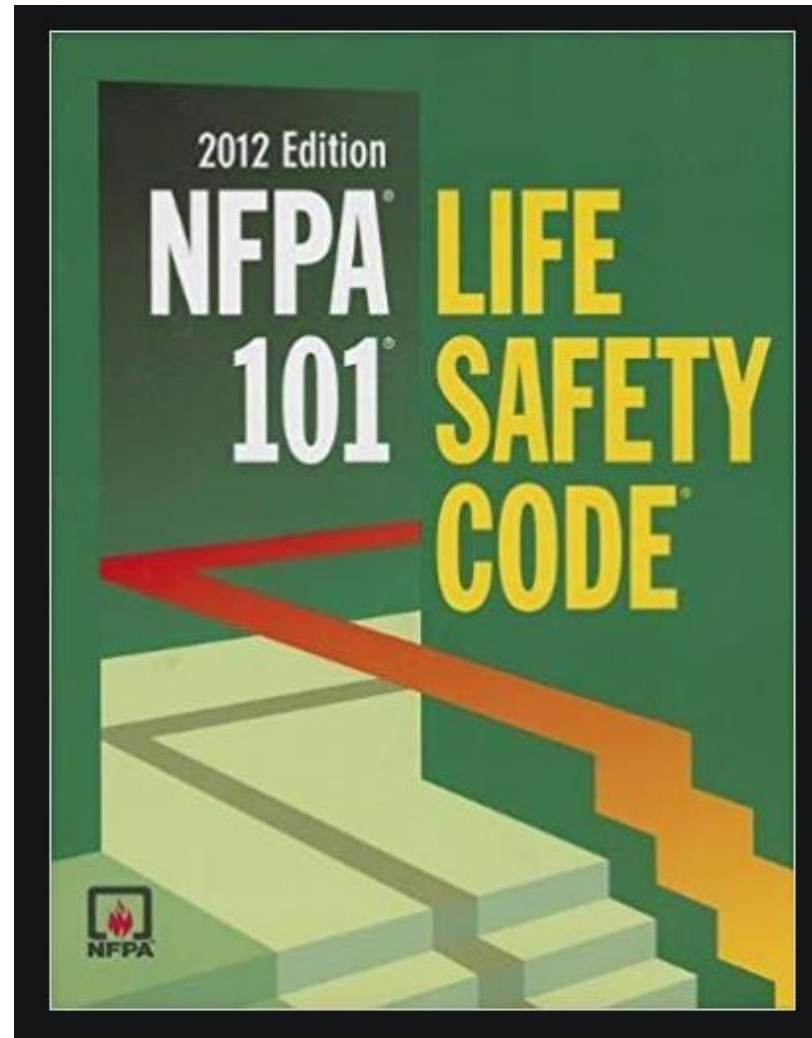
FROM: Director
Survey and Certification Group

SUBJECT: Adoption of the 2012 edition of the National Fire Protection Association (NFPA) 101 - Life Safety Code (LSC) and 2012 edition of the NFPA 99 - Health Care Facilities Code (HCFC)

Memorandum Summary

- The Centers for Medicare & Medicaid Services (CMS) has adopted by regulation the 2012 LSC and the 2012 HCFC. The regulation effective date is July 5, 2016.
- CMS will begin surveying for compliance with the 2012 LSC and HCFC on November 1, 2016.
- CMS will offer an online transitional training course for existing LSC surveyors to provide an update on the new requirements. The course will be available on September 2, 2016 via the CMS Surveyor Training Website.
- CMS will update the ASPEN program (i.e., the information system which tracks surveys) and CMS Fire Safety Forms (2786) prior to the November 1, 2016 survey start date.

DO YOU
HAVE A
COPY?



Navigating the Life Safety Code?

- Understand your required “Occupancy” Chapter.
- **EXISTING HEALTHCARE- CHAPTER 19**
- This will be your guideline to navigating the life safety code.
- When your referred to other “core” chapters then you navigate outside your occupancy chapter.

Referenced Publications

- Understanding where to navigate outside the life safety code and how to accurately find the correct year.
- In any manual this will be CHAPTER 2. There will find any referenced manual with its applicable year to be reviewed.

Occupancy Chapter-19

Existing Healthcare Facilities-

Chapter 19 2012

New Healthcare Facilities-

Chapter 18 2012

Any facility built or plans submitted on/after July 5th, 2016 would be deemed a new healthcare occupancy.

Understanding Existing Healthcare Construction



Internal Building Construction

- Fire Barrier(s)
- Smoke Barrier(s)
- Hazardous Area(s)
- Corridor Wall(s)

Fire Barriers:

Definitions, Common Locations, and Ratings

- **Fire Barrier: A continuous membrane or a membrane with discontinuities created by protected openings with a specified fire protection rating. Limits the spread of fire and restricts the movement of smoke.**
- Oxygen Closets- 1 hour rated enclosure
- Stairwell enclosures- 1 hour rating up to 4 stories, 2 hour-4 stories or more.
- Chute enclosures- 1 hour rating up to 4 stories, 2 hour-4 stories or more.
- Rooms entering chute inlet and discharge areas
- Elevator Vestibules- State of CT Public Health Code Requirement
- Elevator Machine Room- 2 hour rated enclosure

Smoke Barriers:

Definition, Common Locations, and Ratings

Definition: A continuous membrane, or a membrane with discontinuities created by protective openings, where such membrane is designed and constructed to restrict the movement of smoke.

- Subdivision of building spaces
- Provided every 30 patient beds or the compartment shall not exceed 22,500 square ft.
- It shall be rated for a minimum of 30 minutes.

Hazardous Area Locations:

- **NFPA 101 2012 Hazardous areas identified**
- Areas shall be 1 hour rated **OR** shall be provided with an approved sprinkler system.
- Boiler Rooms and fuel fired heater rooms
- Laundry Rooms 100sq. Ft or more
- Paint Shops
- Repair Shops
- Rooms with soiled linen in excess of 64 gallons
- Rooms or spaces larger than 50 sq. ft, including, repair shops, storing combustible supplies deemed by AHJ.
- Laborites using flammable materials

Corridor Walls

- Constructed to resist the passage of smoke.
- Constructed with a minimum of ½ hour fire rating.
- In smoke compartments protected throughout by an approved automatic sprinkler system the corridors walls are permitted to terminate at the ceiling where the ceiling is constructed to limit the passage of smoke.

Life Safety- CMS Compliance

Fire Drills

Fire Sprinkler Systems

Fire Alarm Systems

Kitchen Suppression Systems

Fire Extinguishers

Emergency Lights

Emergency Generators

Emergency Preparedness

And MORE!!

Fire Drills

Fire Drill Requirements

Code Section: 19.7

19.7.1.2- All employees shall be periodically instructed and kept informed with respect to their duties required.

19.7.1.4- Fire Drills in health care occupancies shall include the transmission of a fire alarm signal and simulation of emergency fire conditions.

19.7.1.5- Infirm or bedridden patients SHALL NOT be required to be moved during drills to safe areas or the exterior of the building.

19.7.1.6- Drills SHALL be conducted quarterly on each shift to familiarize personnel with the signals and emergency action required.

19.7.1.7- When drills are conducted between 9:00pm and 6:00am, a coded announcement shall be permitted to be used instead of audible alarms.

Fire Drill Response

Code Section: 19.7.2

19.7.2.1.2- The basis response required of staff shall include the following:

- (1) Removal of all occupants directly involved with the fire emergency.
- (2) Transmission of an appropriate fire alarm signal to warn other building occupants and summon staff.
- (3) Confinement of the effects of the fire by closing doors to isolate the fire area.
- (4) Relocation of patients as detailed in the health care occupancy's fire safety plan.

Sprinkler Systems



Wet- Fire Sprinkler Systems

- **Monthly Inspection by facility staff:**
 - Monthly system gauge inspection
 - Valve body free from and corrosion of water
 - Fire sprinkler control valves are in the open position.
- **Quarterly Inspections by service provider.**
 - Main Drain Test
 - Water Flow Alarm Test
 - Control Valve Test- (Supervisory/Fire Alarm Signals)
- **Annual Inspection by service provider.**
 - Full building investigation shall be performed
 - Check for head dates, painted heads, corroded piping, etc.
- **Ensure you review your report for accuracy.**

Dry Fire Sprinkler System

- **Monthly Inspection by facility staff:**
 - Monthly gauge inspection
 - Valve body free from and corrosion of water
 - Fire sprinkler control valves are in the open position.
- **Quarterly Inspections by service provider.**
 - Main Drain Test
 - Water Flow Alarm Test
 - Control Valve Test- (Supervisory/Fire Alarm Signals)
- **Annual Inspection by service provider.**
 - Full building investigation shall be performed
 - Partial trip testing of the system is required
 - Three-year full system trip is required
 - Three-year air leakage test is required
 - Check for head dates, painted heads, corroded piping, etc.
- **Ensure you review your report for accuracy.**

Sprinkler Requirements Continued

- Annual Fire Backflow Inspection.
- Five-year internal and obstruction investigation.
- Five-year system gauge replacement or re-calibration.
- Five-year Fire Department Connection Hydrostatic testing.
- Five-year Standpipe Flow.
- Quick Response Sprinkler Head Replacement/Testing- Every 20 Years.
- Standard Response Sprinkler Head Replacement/Testing- Every 50 Years.
- Dry Pendant Sprinkler Head Replacement/Testing- Every 10 Years.
- **Important note:** Sampling of heads shall be conducted in the following way:
 - Heads shall be sampled by a minimum of 4 heads or 1% of the system. Any one head fails during sample all like heads shall be replaced without delay.

Fire Sprinkler FACTS!

- Monitor facility to ensure that there are no gaps in ceiling adjacent to sprinkler heads.
NFPA 101 6.2.7
- Ensure that all storage is kept at least 18 inches below and away from any sprinkler head
- Monitor facility to ensure that cubicle curtains are installed to prevent interference with the sprinkler system
- Maintain a supply of at least two spare sprinkler heads for each type of sprinkler used in the facility. (Note- more than two sprinkler heads may be required depending on the number of heads used in a facility). Keep the sprinkler wrench with the spare sprinkler heads. Minimum of 6 sprinkler heads required.
- Ensure that the same type of sprinkler head is used throughout each compartment. (Note there are exceptions for special areas such as boiler rooms which may have higher than normal temperatures.) According to NFPA 13 2010 Edition, a compartment is defined as a space completely enclosed by walls and a ceiling.

Fire Sprinkler FACTS!

- 2010 NFPA 13 describes fully sprinkler coverage to include all:
 - Closets – must have sprinkler protection
 - Area behind dryers in laundry
 - Walk-in coolers/freezers
 - Linen/trash chutes
 - Attic spaces
 - Overhangs that extend more than 48” from building with limited unless construction of non-combustible or limited combustible materials according to 2010, NFPA 13, Chapter 8
 - Elevator machine rooms and shaft space with limited exceptions according to 2010, NFPA, Chapt. 8
 - Electrical rooms with limited exceptions according to 2010, NFPA 13, Chapter 8
- **Maintain sprinkler heads clean, dust free, and paint free**

Painted
heads inside
attics



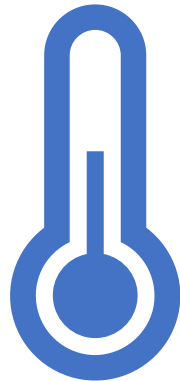
Fire Pumps



Fire Pumps

- A monthly test of electric motor-driven fire pump assemblies shall be conducted without flowing water. This test shall be conducted by starting the pump automatically. The pump shall run a minimum of 10 minutes.
- A weekly test of a diesel engine-driven fire pump assemblies shall be conducted without flowing water. This test shall be conducted by starting the pump automatically, and the pump shall run a minimum of 30 minutes.
- Fire pumps shall be tested conducted under minimum, rated, and peak flows of the fire pump by controlling the quantity of water discharged through approved test devices **annually.**

Winter Months- Fire Sprinkler



Temperature of your room where the valves are present shall maintain a minimum of 40F.



Dry Drip Drums shall be drained down daily until water is free from drum. Weekly thereafter.

Fire Alarm Systems



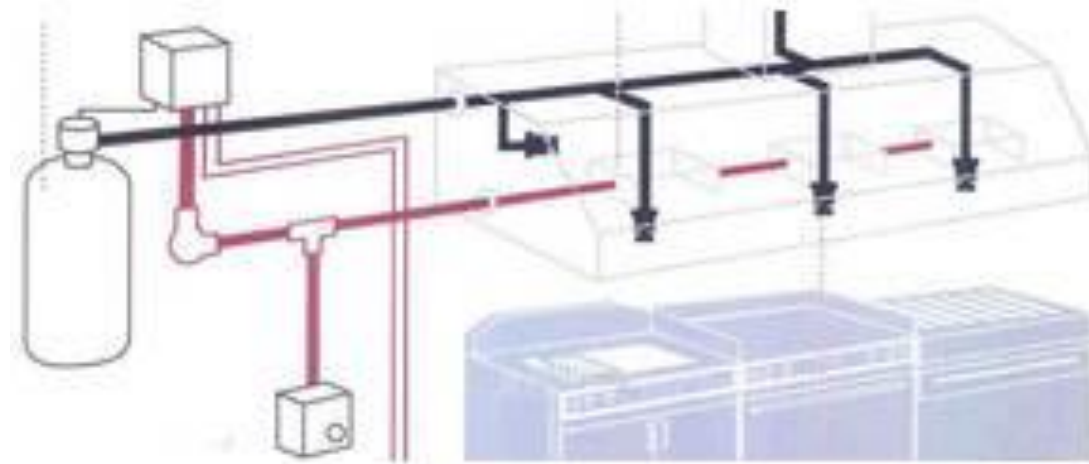
Fire Alarm Systems

- 24/7 central monitoring and/or supervisory communication. (Fire Department)
- Monthly fire alarm: Testing of communication devices. This should be done during alarm activations.
- Semi-Annual Inspection of system.
- Annual Fire Alarm Inspection. Testing of all devices with a record of all devices. This includes all manual pull stations, heat detectors, smoke detectors, etc. Ensure that smoke detectors are installed the appropriate distance from intake and exhaust ventilation. No closer than 3 feet
- Sensitivity: One year after installation and Every (2) two years thereafter.
- Fire Alarm Batteries: Inspected semi-annual for load and replaced every (3) third year
- **Ensure you review your report for accuracy!**

Fire Alarms Continued

- NFPA 72 requires smoke detectors to be sensitivity tested at certain intervals and those test results must be documented. A self-monitoring system meets the test criteria of NFPA 72 even without individual smoke detector testing with a special sensitivity testing device. However, the self-monitoring system does not meet the documentation requirements, because sensitivity records must be available for review. The facility can either produce a printed sensitivity report from the fire alarm panel (must be dated within the required timeframe before the date of inspection)
- The sensitivity report from a self-monitoring system will most likely be in a format that does not clearly show the sensitivity levels of each smoke detector. If this is the case, then the facility should have some documentation to show how numbers in the sensitivity report translates to actual sensitivity levels that can be compared to the listed sensitivity range for all smoke detectors

Kitchen Suppression Systems



Kitchen Suppression Systems

- Require monthly inspection of system.
- Semi Annual Testing
- 6 Year Service on Cylinder
- 12 Year Hydrostatic
- Gas Appliances should be tethered shorter than the flexible whip.

Verification of the following.

Inspection Activity:	Yes	No	N/A	Comments
1. Is the extinguishing system in its proper location?				
2. Are the manual actuators free from obstructions?				
3. Are the tamper indicators and seals intact?				
4. Is the maintenance tag or certification tag in its proper place?				
5. Is the extinguishing system free from any obvious physical damage or condition that might prevent operation?				
6. Is the pressure gauge on the agent cylinder in its normal operating range?				
7. Are the nozzle blow-off caps intact and free from damage?				
8. Are the hood, duct, or the cooking appliances protected by the hood, free from any modifications or relocations since the last inspection?				

Fire Extinguishers



Fire Extinguishers

- Inspect portable fire extinguishers monthly and maintain annually. NFPA 10 2010
- Perform and internal inspection of fire extinguishers every six years
- Conduct 12-year hydrostatic vessel test. NFPA 101 7.3.1.2.1

Emergency
Lighting



Emergency Lighting

- Conduct a functional test on all battery-operated emergency lighting system at 30-day intervals for not less than 30 seconds. Conduct the annual test on every required battery-powered emergency lighting system for not less than 1.5 hours (90 minutes). Ensure that equipment is fully operational for the duration of the test. Written records of visual inspections and tests shall be kept by the facility

Emergency
Generator



Emergency Generators

- Inspect all generators weekly and exercise under load for 30 minutes per month in accordance with NFPA 99, 2012 section 6.4.4.1.1.3 and NFPA 110 2010 Edition. Maintenance and testing of essential electrical system
- The monthly testing of Level 1 and Level 2 EES needs to be conducted by the following methods:
- Under operating temperature conditions or at not less than 30 percent of the EPS nameplate rating
- Diesel-powered EPS installations that do not meet the above requirements shall be exercised monthly with the available EPS load and exercised annually with supplemental loads at 50 percent of nameplate rating for 30 minutes, followed by 75 percent of nameplate rating for 60 minutes, for a total of 1.5 continuous hours

Emergency
Preparedness
Plan



Emergency Preparedness- Training

Staff Training and programs:

- All employees are trained, as part of their employment orientation. The disaster program includes orientation and ongoing training and drills for all personnel in all procedures so that each employee promptly and correctly carries out his/her specific role in case of a disaster.
- Orientation of new employees includes review of the overall emergency preparedness plan, training in the use of fire-fighting equipment, activation of fire alarms, and evacuation and transfer procedures.



Emergency Preparedness- Drilling of the Plan

At Minimum the following training will be completed semi-annually:

The facility will participate in **ONE full-scale** exercise annually that is community based or when a community-based exercise is not available, an individual, facility based. If the facility experiences an actual natural or man-made emergency that requires the activation of the plan, the facility will not be required to engage in a community based or individual, facility-based full-scale activation for a period of one year after the event.

Conduct an additional semi-annual exercise that may include, but not limited to the following:

- A second full-scale exercise that is community-based or individual, facility-based.
- A tabletop exercise that includes a group discussion led by a facilitator, using a narrated, clinically-relevant emergency scenario. And a set of problems statements, directed messages, or prepared questions designed to challenge an emergency plan.

Life Safety
Inside the
Facility



Corridor Width / Means of Egress

- Monitor corridors serving as exit access to ensure that they are clear and unobstructed.
 - NFPA 101 2012 Edition allows for the following for

Fixed Furniture:

- Is securely attached to the floor or to the wall and does not reduce the clear unobstructed corridor width to less than 6 feet
- Is located only on one side of the corridor and each group does not exceed an area of 50 square feet and is separated from each other by a distance of at least 10ft
- Is located to not obstruct access to building service and fire protection equipment
- Corridors are protected by an electrically supervised automatic smoke detection system or the fixed furniture spaces are arranged and located to allow direct supervision

Wheeled Equipment

NFPA 101 2012 Edition allows for the following for:

- Does not reduce the clear unobstructed corridor width to less than 60 inches
- The health care occupancy fire safety plan and training program address the relocation of the wheeled equipment during a fire or similar emergency
- Wheeled equipment is limited to the following:
 - Equipment in use and carts in use
 - Medical emergency equipment not in use
 - Patient lift and transport equipment
 - “Not in use” criteria still applicable

Wheeled Equipment, Etc.

- Linen carts, soiled utility carts, wheelchairs and lifts may not be stored in hallways. Isolation carts and crash carts are allowed in the corridors
- Monitor facility to ensure that the facility does not have combustible decorations unless they are flame-retardant. Exception: Combustible decorations, such as photographs and paintings, in such limited quantities that a hazard of fire development or spread is not present
- Storage occurs when an item is left in place or not in use for over 30 minutes. If the appropriate staff is around and using something every 30 minutes the item is not considered to be stored

Interior Finishes – Wall and Ceilings

- 19.3.3.2- Existing Interior wall and ceiling finish materials complying with section 10.2 shall be permitted to be Class A or Class B.
- 10.2.8.1- Where an approved automatic sprinkler system is installed with accordance with section 9.7, Class C interior wall and finish materials shall be permitted where Class B is required, and interior class B Interior wall and ceiling finish materials shall be permitted in any location where Class A is required.

Interior Finishes – Wall and Ceilings

- Decorations on non-fire-rated doors do not interfere with the operation of any required latching of the door and do not exceed area limitations
- Decoration do not exceed 30 percent of the wall, ceiling, and door areas inside any room or space of a smoke compartment that is protected by an approved supervised automatic sprinkler system
- Decoration do not exceed 50 percent of the wall, ceiling, and door areas inside patient sleeping rooms having a capacity not exceeding four persons, in a smoke compartment that is protected throughout by an approved, supervised automatic sprinkler system
- Interior finish that is an approved existing installation of materials applied directly to the surface of walls and ceilings in a total thickness of less than 1/28 in. shall be permitted to remain in use
- Facilities are required to maintain documentation as to the flame and smoke spread ratings of all their interior finishes that have been replaced and or updated

Alcohol Based Hand Rub (ABHR) Dispensers

- Ensure that corridors are at least 6 feet wide before installing dispensers and that there is a minimum spacing of 4 feet between dispensers
- Ensure that dispensers in all locations are not installed over or adjacent to an ignition source such as an electrical switch or outlet. If adjacency is in question, look for evidence of spill, splash, or spray pattern from the ABHR dispenser
- Ensure that the maximum individual fluid dispenser capacity is 1.2 liters (2 liters in suites of rooms) and that there are not more than 10 gallons in a single smoke compartment outside a storage cabinet. Storing of quantities greater than 5 gal (18.9L) must meet the requirements of NFPA30. Aerosol Dispensers < 18oz
- If the floor is carpeted, the building must be fully sprinklered to install dispensers

Decorations and Photographs

- Combustible decoration shall be prohibited in any health care occupancy. Unless ONE of the following criteria is met:

1. They are flame-retardant or are treated with approved fire-retardant coating that is listed and labeled for application to such material.
2. The decorations meet the requirements of NFPA 701.
3. The decorations exhibit the heat release rate not exceeding 100kW when tested in accordance with NFPA 289.
4. The decorations such as photographs, paintings, and other art, are attached directly to the walls, ceiling, and NON-FIRE RATED DOORS.
 - A) Decorations on non-fire rated doors do not interfere with the operations or any required latching of the door and do not exceed the area limitations of B, C, D.
 - B) DOES NOT APPLY- NON-SPRINKLERED FACILITY
 - C) Decorations do not exceed 30% of any wall, ceiling, or door inside a smoke compartment.
 - D) Decorations do not exceed 50% of any wall, ceiling, or door inside a resident room.



Pictures exceeding allowed limits



Exterior Decorations

- Monitor use of outdoor decorations that are placed near the building as these can create a hazard, e.g. hay bales. Consider alternative to mulch in outside bedding areas to reduce the risk of fire

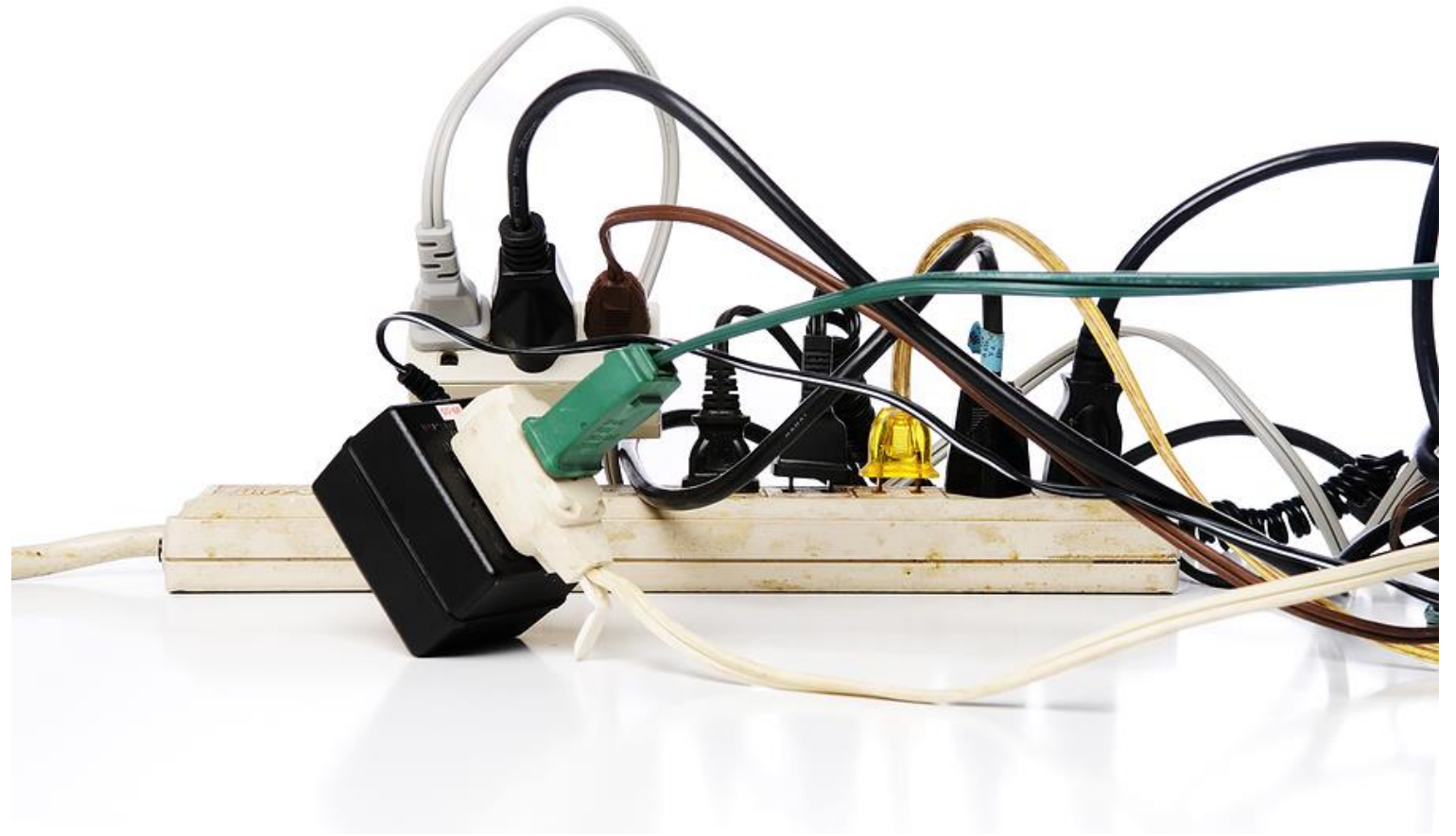


Mulch outside

Christmas Decorations

- Monitor facility to ensure that furnishings or decorations of an explosive or highly flammable character are not used. Examples of explosive or highly flammable decorations include live or cut Christmas trees and pine branches/roping/garland; not effectively flame-retardant treated crepe paper decorations; finely divided tinsel-like material, garland; plastic decorations

Christmas
Decorations
gone wrong



For more code issues/compliance standards



FCS

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