MECKLENBURG COUNTY FIRE MARSHAL'S OFFICE

CODE REQUIREMENTS FOR VISUAL INSPECTIONS

DAILY / WEEKLY INSPECTION		REFERENCE
SPRINKLERS	Gauges (Dry, Preaction, and Deluge Systems)	**NFPA 25**
	Cold Weather Enclosures	
	VALVES, VALVE COMPONENTS AND TRIM INSPECTIONS	
	Sealed Control Valves	
	Master Pressure Reducing	
	FIRE PUMP SYSTEM	
	Casing Relief Valves	
	Pressure Relief Valves	
	Pump House, Heating Ventilation Louvers	
	BACKFLOW PREVENTION ASSEMBLIES	
	Reduced Pressure	
	Reduced Pressure Detectors	
	Control Valves (Locked/Supervised)	
	STANDPIPE	
	Sealed Control Valves	

MONTHLY INSPECTION		REFERENCE
PORTABLE FIRE EXTINGUISHERS	Locations of Pressure Tamper Indicator, Hose/Nozzle Sign, Hanger, Hazard Assessment, Hazardous Materials Identification Systems (HIMS) Label	**NFPA 10**
	Location in Accessible Area	
	No Obstruction to Access or Visibility	
	Operating Instructions on Nameplate Legible and Facing Outward	
	Safety Seals and Tamper Indicators not Broken or Missing	
	Fullness Determined by Weighing or "Hefting"	
	Examination for Obvious Physical Damage, Corrosion, Leakage or Clogged Nozzle	
	Pressure Gauge Reading or Indicator in the Operable Range or Position	
	Condition of Tires, Wheels, Carriage, Hose, and Nozzle (For Wheeled Extinguisher Units)	
	Hazardous Materials Identification System (HMIS) Label in Place	
AUTOMATIC FIRE ALARM	**CONTROL EQUIPMENT: FIRE ALARM SYSTEMS UNMONITORED FOR ALARM, SUPERVISORY, AND TROUBLE SIGNALS**	**NFPA 72** **ULC S536**
SPRINKLERS	Gauges (Wet, Dry, Preaction, and Deluge Systems)	**NFPA 25**
	VALVES, VALVE COMPONENTS, TRIM INSPECTIONS	
	Locked/Supervised Control Valves	
	Valve Supervisory Switches	
	Tamper Switches	
	Alarm Valves (Exterior Bells)	
	Dry Pipe, Deluge, Preaction Valves	
	Pressure Reducing Valves	
	BACKFLOW PREVENTION ASSEMBLIES	
	Double Check Valves	
	Control Valves (Locked/Supervised)	
EMERGENCY LIGHTS / EXIT SIGNS	Function Test	**NFPA 101** **NFPA 70**
HOOD SUPPRESSION SYSTEM	Owners Inspections	**NFPA 17**

QUARTERLY INSPECTION		REFERENCE
SPRINKLERS	Alarm Devices	**NFPA 25**
	Fire Department Connections	
	Pressure Reducing and Relief Valves	
	Sprinkler Systems	
	Hose Connections	
	Hose Racks	
	BACKFLOW PREVENTION ASSEMBLIES	
	Fire Department Connections	
	Standpipe	
	Private Fire Service Maintenance	

SEMI ANNUAL INSPECTION		REFERENCE
HOOD SUPPRESSION SYSTEM	Suppression System	**NFPA 96**
	Fusible Link Replacement	**NFPA 17, 17A**
AUTOMATIC FIRE ALARM	**CONTROL EQUIPMENT: FIRE ALARM SYSTEMS MONITORED FOR ALARM, SUPERVISORY, AND TROUBLE SIGNALS**	**NFPA72** **ULCS536**
	Fuses	
	Interfaced Equipment	
	Lamps and LEDs	
	Primary (Main) Power Supply	
	CONTROL EQUIPMENT: FIRE ALARM SYSTEMS UNMONITORED FOR ALARM, SUPERVISORY, AND TROUBLE SIGNALS	
	Nickel-Cadmium	
	Sealed Lead-Acid	
	Transient Suppressors	

SEMI ANNUALLY INSPECTION (Continued)		REFERENCE
	Control Unit Trouble Signals	
	Emergency Voice/Alarm Communications Equipment	
	Remote Annunciators	
	BATTERIES	
	Sealed Lead-Acid	
	INITIATIGN DEVICE	
	Air Sampling Smoke Detectors	
	Duct Smoke Detectors	
	Electromechanical Releasing Devices	
	Fire Extinguishing Systems or Suppressing Systems Switches	
	Fire Alarm Pull Stations	
	Heat Detectors	
	Smoke Detectors	
	Interface Equipment	
	Alarm Notification Appliances - Supervised	
	SUPERVISING STATION FIRE ALARM SYSTEM - TRANSMITTERS	
	Digital Alarm Communicator Transmitter (DACT)	
SPRINKLERS	**PRIVATE FIRE SERVICE**	**NFPA 25**
	Monitor Nozzles	

ANNUAL INSPECTION		REFERENCE
HOOD SUPPRESSION SYSTEM	Fusible Links	**NFPA 17, 17A**
	Cartridge (Hydrostatic Test/Replacement) – PYROCHEM (FM200)	
PORTABLE FIRE EXTINGUISHERS	All of Monthly Inspection, Plus Conductivity Test (Carbon Dioxide), Determination of 6 year or Hydrotest, Inspection of Shell and Nameplate, Hanger/Seismic Bracing	**NFPA 10**
AUTOMATIC FIRE ALARM	**CONTROL EQUIPMENT: FIRE ALARM SYSTEMS MONITORED FOR ALARM, SUPERVISORY, AND TROUBLE SIGNALS**	**NFPA 72** **ULC S536**
	Fuses	
	Interfaced Equipment	
	Lamps and LEDs	
	Primary (Main) Power Supply	
	CONTROL EQUIPMENT: FIRE ALARM SYSTEMS UNMONITORED FOR ALARM, SUPERVISORY, AND TROUBLE SIGNALS	
	Radiant Energy Fire Detectors	
	Supervisory Signal Devices	
	Water-flow Devices	
SPRINKLERS	Pipe and Fittings	**NFPA 25**
	Hangers/Seismic Bracing	
	Sprinklers (From Floor)	
	Spare Sprinklers	
	STANDPIPE	
	Piping	
	Hose Racks	
	Hose Connections/Hose Valves	
	Hose/Hose Nozzles	
	VALVES, VALVE COMPONENTS AND TRIM INSPECTIONS	
	Interior Dry, Deluge, Preaction	
	Pressure Reducing Valves	
	PRIVATE FIRE SERVICE	
	Private Hydrants	
	Main Line Strainers	
EMERGENCY LIGHTS / EXIT SIGNS	90 Minute Drain Test and Inspection, Verification of Charge Voltage, Alignment of Heads, Hazard Assessment	

5 YEAR INSPECTION		REFERENCE
SPRINKLERS	Internal Obstruction Investigation	**NFPA 25**
	VALVES, VALVE COMPONENTS AND TRIM INSPECTIONS	
	Strainers, Filters, Orifices	
	Interior Check Valves	
	Interior Alarm, Dry, Deluge, Preaction Valves	

12 YEAR INSPECTION		REFERENCE
HOOD SUPPRESSION SYSTEM	Regulator	**NFPA 17, 17A**
	Tank Cylinder (Hydrostatic Test)	
	Cartridge (Hydrostatic Test/Replacement) – ANSUL	
	Actuation Hose (Hydrostatic Test/Replacement)	

MECKLENBURG COUNTY FIRE MARSHAL'S OFFICE

CODE REQUIREMENTS FOR FUNCTION TESTING INSPECTIONS

MONTHLY FUNCTION TEST		REFERENCE
AUTOMATIC FIRE ALARM	**DAILY AND MONTHLY STATUS CHECK** Supervisory Field Devices, Supervisory Circuits and Data Communication Link (DCL) In-and-Out Conductors of Supervised Circuits, Ancillary Device Control Circuit, One Initiating Field Device, Operation of Common Audible and Visual Trouble Signals, One Emergency Phone, Voice Paging Capability to One Zone Battery Terminals are Clean and Lubricated, Terminal Clamps are Secure, electrolyte Level and Specific Gravity	**ULC S536**
PORTABLE FIRE EXTINGUISHERS	Ensure in Proper Operating Condition, Safety Seals, Tags, Pressure Gauge Readings, Hazardous Materials Identification Systems (HIMS) Label	**NFPA 10**
EMERGENCY LIGHTS	30 Seconds Quick Check and Battery Check	**NFPA 101**
FIRE PUMP	Weekly System Procedures (Electric 10 Minutes, Diesel 30 Minutes)	**NFPA 25**

QUARTERLY FUNCTION TEST		REFERENCE
SPRINKLERS	Mechanical Water Flow Devices **VALVES AND VALVE COMPONENTS** Low Air Pressure Alarms Quick Openings Devices Priming Water	**NFPA 25**

SEMI ANNUAL FUNCTION TEST		REFERENCE
HOOD SUPPRESSION SYSTEM	All Kitchen Suppression Systems	**NFPA 17**
SPRINKLERS	Valve Supervisory Devices	**NFPA 25**

ANNUAL FUNCTION TEST		REFERENCE
PORTABLE FIRE EXTINGUISHERS	Conductivity Test of All Carbon Dioxide Hose Assemblies, Ensure in Proper Condition, Safety Seals, Tags, Pressure Gauge Reading, Hazardous Materials Identification Systems (HIMS) Label, Empty and Recharge all Stored Pressure Loading Stream Fire Extinguishers	**NFPA 10**
AUTOMATIC FIRE ALARM	**CONTROL EQUPMENT: BUILDING SYSTEMS CONNECTED TO SUPERVISING STATION** Functions, Fuses, Interface Equipment, Lamp and LEDs, Primary (Main) Power Supply, Transponders **BATTERIES – FIRE ALARM SYSTEMS** **CONTROL UNIT TROUBLE SIGNS** **EMERGENCY VOICE/ALARM COMMUNICATIONS EQUIPMENT** **REMOTE ANNUNCIATORS** **INITIATING DEVICES** Duct Smoke Detectors Electromechanical Releasing Devices Fire Extinguishing System or Suppression System Switches Fire Alarm Pull Stations Heat Detectors Smoke Detectors Gas or other Detectors **INTERFACE EQUIPMENT** **SPECIAL HAZARD EQUIPMENT** **ALARM NOTIFICATION DEVICES** Audible Devices Audible Textual Notification Appliances Visible Devices **SUPERVISING STATION FIRE ALARM SYSTEM (TRANSMITTERS)** Digital Alarm Communicator Transmitter (DACT) Digital Alarm Radio Transmitter (DART) **SPECIAL PROCEDURES**	**NFPA 72** **ULC S536**
SPRINKLERS	Main Drain Antifreeze Solution **VALVES AND VALVE COMPONENTS** Pressure Reducing Valve/Relief (Partial Flow) Master Pressure Reducing Valves (Full Flow) Control Valves Dry System, Partial Trip Test Deluge System, Preaction Full Trip Test Air Maintenance Devices **BACKFLOW PREVENTION ASSEMBLIES** Full Forward Flow Test **STANDPIPE** Main Drain Test Hose Valves Valves (All Types) **PRIVATE FIRE SERVICE** Monitor Nozzles Hydrants **FIRE PUMP SYSTEM** Full Flow Annual Maintenance	**NFPA 25**

3 YEAR INTERVAL FUNCTION TEST		REFERENCE
SPRINKLERS	Dry System Full Flow Trip Test Dry System Air Leakage	**NFPA 25**

5 YEAR INTERVAL FUNCTION TEST		REFERENCE
PORTABLE FIRE EXTINGUISHERS	Hydrostatic Testing of Carbon Dioxide, Wet Chemical and Foam Extinguishers Dry System Air Leakage Hydrostatic Testing of Cartridges Associated with Portable Fire Extinguishers and Wheeled Units Hydrostatic Testing of Carbon Dioxide Hoses Equipped with a Shut-Off-Valve	**NFPA 10**
SPRINKLERS	Gauges Sprinklers – Extra High Temperature/Corrosive Atmosphere **FIRE DEPARTMENT CONNECTIONS** Hydrostatic Test Siamese Connections **STANDPIPE – FULL FLOW TEST AT REMOTE POINT** Hose Connection Pressure Reducing Valves (Full Flow) Hydrostatic Test Manual/Dry Standpipes	**NFPA 25**
STANDPIPE HOSES	5 Year for New Hoses and Every 3 Years Thereafter **VALVES AND VALVE COMPONENTS** Pressure Reducing Valves/Relief Valves (Full Flow) **PRIVATE FIRE SERVICES** Full Flow Test	

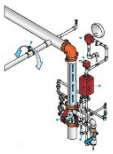
6 YEAR INTERVAL FUNCTION TEST		REFERENCE
PORTABLE FIRE EXTINGUISHERS	Stored-Pressure extinguishers Requiring 12 Year Hydrostatic Test Shall be Emptied and Subjected to Applicable Maintenance Procedures	**NFPA 10**

12 YEAR INTERVAL FUNCTION TEST		REFERENCE
PORTABLE FIRE EXTINGUISHERS	Hydrotest of Dry Chemical and Clean Agent Extinguishers Hydrotest of Dry Chemical Hose Equipped with a Shut-Off-Valve	**NFPA 10**
HOOD SUPPRESSION SYSTEM	Hydrostatic Testing Cylinder Replacement of Cartridge Regulator Test Wet Chemical Containers Auxiliary Pressure Containers Hose Assemblies	**NFAP 17A**

10 YEAR INTERVAL AND GREATER FUNCTION TEST		REFERENCE
SPRINKLERS	**DRY TYPE** At 10 Years and Every 10 Years Thereafter **QUICK RESPONSE** At 20 Years and Every 10 Years Thereafter **STANDARD** At 50 Years and Every 10 Years Thereafter	**NFPA 25**

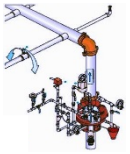
WET PIPE SPRINKLER SYSTEM

A wet pipe sprinkler system is a sprinkler system employing automatic sprinkler heads attached to a piping system containing water and connected to a water supply so that water discharges immediately from sprinklers opened by heat from a fire.



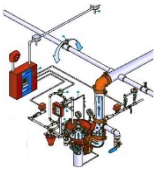
DRY PIPE SPRINKLER SYTEMS

A dry pipe sprinkler system is sprinkler system employing automatic sprinklers that are attached to a piping system containing air or nitrogen under pressure, the release of which (as from the opening of a sprinkler) permits the water pressure to open a valve known as a dry pipe valve, and the water then flows into the piping system and out the opened sprinklers. Dry pipe sprinkler systems are installed in areas where wet pipe systems may be inappropriate such as areas where freezing temperatures might be expected.



PRE-ACTION SPRINKLER SYSTEM

A pre-action sprinkler system is similar to a deluge sprinkler system except the sprinklers are closed. This type system is typically used in areas containing high value equipment or contents and spaces which are highly sensitive to the effects of accidental sprinkler water discharge. The pre-action valve is normally closed and is operated by a separate detection system.
Activation of a fire detector will open the pre-action valve, allowing water to enter the system piping. Water will not flow from the sprinklers until heat activates the operating element in individual sprinklers. Opening of the pre-action valve effectively converts the system to a wet pipe sprinkler system.



DELUGE SPRINKLER SYTEMS

A deluge system is sprinkler system employing open sprinklers that are attached to a piping system that is connected to a water supply through a valve that is opened by the operation of a detection system installed in the same areas as the sprinklers. When this valve opens, water flows into the piping system and discharges from all sprinklers attached thereto.
Deluge systems are used where large quantities of water are needed quickly to control a fast-developing fire. Deluge valves can be electrically, pneumatically or hydraulically operated.