

# STANDARDS/REQUIREMENTS IDENTIFICATION DOCUMENT

## FUNCTIONAL AREA 12.0

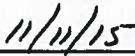
### FIRE PROTECTION (U)

**November 3, 2015**  
**REVISION 15-03**

This document was approved by DOE-SR on the above date.



\_\_\_\_\_  
Manager, Contractor Assurance



\_\_\_\_\_  
Date

Savannah River Remediation LLC  
Savannah River Site  
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## 12.00 FIRE PROTECTION

Standards/Requirements Identification Document (S/RID) Functional Area 00, S/RID Purpose and Development, contains general information on the development (including the type of source documents considered), assessment, approval, and maintenance of the [Savannah River Remediation \(SRR\) S/RID](#) which is pertinent to the understanding of this functional area. Refer to [Functional Area 00](#) for a complete understanding of this functional area.

### Objectives

This Functional Area defines the performance-based objectives for fire protection at SRR. -These objectives include a comprehensive fire protection program that will:

1. minimize the likelihood of occurrence of a fire-related event;
2. minimize the consequence of a fire-related event affecting the public, workers, environment, property and missions, and
3. provide a level of safety protection consistent with the “highly protected risk” (HPR) class of industrial risks. The term “highly protected risk” is considered to be fire protection sufficient to satisfy monetary loss limits set forth in the requirements.

In addition, a comprehensive fire safety and fire emergency response program will protect workers commensurate with the nature of the work that is performed.

### Fire Protection Program

This functional area includes the specific Fire Protection Program requirements. Related aspects of management, policy, staffing, and training are also covered in other S/RID functional areas. Implementation of the Fire Protection Program includes communication, coordination, and integration within the Fire Protection organization, and other on-site organizations. This includes appropriate facility fire protection, fire alarm notification and egress features and access to a fully staffed, trained, and equipped emergency response organization that is capable of responding in a timely and effective manner to site emergencies.

The Fire Protection Program will include those fire protection criteria and procedures, analyses, hardware, systems, apparatus, equipment, and personnel to comprehensively ensure that the objectives above are met. This includes meeting applicable building codes and National Fire Protection Association (NFPA) codes and standards.

An overview of the Fire Protection Program will be submitted to DOE-SR for approval and will include a compliance matrix to DOE-STD-1066-2012 per DOE-SR letter of clarification OSQA-15-0094.

### Requirements

Many facilities were constructed either under a code-of-record (CoR) or by site standards in force at the time of construction, therefore, the model building code requirements are intended for new construction and major renovations only and not on a retrofit basis.

The sources for the requirements included in this functional area are 10 CFR 851, DOE O 231.1B, and DOE O 420.1C. Some of the original requirements have been modified for SRNS and therefore SRR as agreed to in SRNS letter, SRNS-U1000-2013-00102, from John Temple to James Lovett, Jr, DOE Letter of response, OSQA-14-0044, from James Lovett, Jr. to John Temple, DOE Letter, OSQA-15-0091, from David Moody to Stuart MacVean providing Delegation of Authority Having Jurisdiction and Facility Assessment

Frequencies, and DOE-SR letter of clarification, OSQA-15-0094, from Angela Morton to John Temple. The requirements shown in Table 1 are linked to the source document. Clarifications are annotated in the requirements text in Table 1 using “Modified for SRR use.”

#### Facility Safety Order Background

Functional Area 12 is made up mostly from requirements found in the DOE Order 420.1 series. DOE Order 420.1 was originally incorporated as a source document in this S/RID functional area in 1998. Over the past several years the document has been modified numerous times including 3 complete revisions and a change resulting in DOE O 420.1C, Change 1, the reason for this most recent S/RID change. In previous updates, attempts were made to use the same S/RID sequence numbers and modify the text associated with the contractor requirements. This was done to preclude the need to make numbering changes to the existing documents that reference the S/RID requirement numbers.

In contrast, the requirements associated with DOE O 420.1C have been assigned all new S/RID sequence numbers. Although many documents (Exemptions, Equivalencies, Fire Hazards Analyses, Manual 2Q, Standard 01120, etc.) make reference to the previous S/RID requirements by number, previously approved documents will not require revision simply due to changes in requirement numbers.

Previous versions of this Functional Area and associated compliance information are available on the Contractor Assurance page on the SRS intranet. These previous versions are considered part of the CoR. Therefore, existing documents making reference to a specific requirement number not found here will be using the CoR. Requirements in this Functional Area are not retroactive unless specifically stated as such.

## 12.01

### APPLICABILITY

The requirements of this Functional Area apply to all government-owned or government-leased facilities and on-site contractor-leased facilities used for DOE mission purposes and under the contractual authority of the Savannah River Remediation (SRR). Off-site non-nuclear, leased facilities will follow the requirements established by the local authority having jurisdiction, instead of this Functional Area, unless otherwise specifically directed by the field office.

## 12.02

### GENERAL FIRE PROTECTION PROGRAM

A Policy Statement will be established that affirms its commitment to provide a comprehensive fire protection and emergency response program that satisfies the various requirements set forth in this S/RID.

The fire protection and fire emergency response programs will be based on meeting or exceeding the International Building Code (IBC) or related building code of record, and any applicable National Fire Protection Association codes and standards. New buildings or major modifications to existing buildings will be constructed to meet the applicable set of codes and standards established as the CoR. Major modifications will be determined by the process outlined in Manual 11Q, Procedure 1.12, Major Modification Determination. Other facility changes will be based on either the existing facility structures, systems and components (SSCs) CoR or the most recent edition of the applicable codes and standards (as appropriate), following the process developed in the Site Engineering Standards Manual, WSRC-TM-95-1, and to the extent determined by the DOE authority having jurisdiction.

Provisions of subsequent editions of codes and standards promulgated after the CoR are mandatory only to the extent that they are explicitly stated to be applicable to existing facilities. SRR does not adopt later editions of NFPA codes and standards until the impact is determined by the M&O contractor and a decision is made to adopt the standard. Where conflicts arise between this Functional Area and the IBC or NFPA codes and standards, this S/RID will take precedence unless an exemption or equivalency is approved by DOE. Conflicts between the building code and NFPA requirements will be resolved by SRR establishing a formal position and submitting the conclusions to the head of the field office through a formal process established by procedure.

## 12.03 FIRE PROTECTION PROGRAM ADMINISTRATION

The fire protection program will be documented and include the elements and requirements necessary to administer adequate design criteria, program operations, fire emergency response, fire hazard analysis, fire protection assessments, wildland fire assessments, and specific fire protection program criteria. Contractor must submit the fire protection program document to the DOE field element for approval.

An acceptable fire protection program will include those fire protection criteria and procedures, analysis, hardware, systems, apparatus and equipment, along with the personnel necessary to ensure the objectives are satisfied as described above in 12.00.

A comprehensive self-assessment of the fire protection program will be conducted at least every three years, or at a frequency justified and acceptable to the DOE field office. The self-assessment of the program will be documented.

Delegation of Authority Having Jurisdiction was provided via DOE-SR letter OSQA-15-0091 dated April 29, 2015, and is included as SRID requirement 12.12.002.

## 12.04 FIRE PROTECTION DESIGN CRITERIA

Design criteria are applicable to new facilities and major modifications as determined in Manual 11Q, Procedure 1.12. A process will be established to ensure that fire protection program requirements are documented and incorporated in the plans and specifications for the design of new facilities and modifications to existing facilities.

New buildings exceeding 5,000 sq ft of floor area will be of Type I or Type II construction as defined in IBC and NFPA 220.

New buildings exceeding 5,000 sq ft of floor area or where the maximum possible fire loss (MPFL) exceeds \$5 million (in 2012 dollars) will be provided with automatic fire suppression systems throughout unless the NFPA codes and standards allow for specific relief within the facility. Existing buildings will be provided with automatic fire suppression systems throughout where a major modification to a building would cause the MPFL to increase and exceed \$5 million (in 2012 dollars) or increase the total floor area to greater than 5,000 sq ft.

Buildings will be provided with automatic fire suppression systems throughout where required by the safety basis documents. Buildings will be provided with automatic fire suppression systems throughout where required for life safety reasons by NFPA 101 or IBC. Buildings will be provided with automatic fire suppression systems throughout where a fire may cause an unacceptable interruption to a mission or program, as deemed in writing by DOE, if automatic systems were not installed. (NOTE: Currently there are no missions or programs at SRS that fall into this category. Such a classification may necessitate a Fire Hazards Analysis if not already required for other reasons.)

Multiple fire protection approaches, such as a fire suppression system, along with fire detection and alarm systems and/or passive fire barriers, will be provided in fire areas which have an MPFL of greater than \$150 million. Furthermore, fire areas will be established using fire walls or other separation approaches to prevent exceeding \$350 million in any single fire area.

## 12.05 FIRE PROTECTION AND LIFE SAFETY SYSTEMS

New fire suppression systems will be designed such that their inadvertent operation or failure will not result in the loss of the safety function of safety significant or safety class systems. This pertains to the proper

design of the fire suppression system to ensure it does not impact safety systems and is not intended to drive the need for redundancy in safety significant systems.

Complete fire rated construction and barriers adequate to isolate hazardous areas will be provided to minimize fire spread and loss potential consistent with limits established in this Functional Area. The fire barrier locations and construction will be documented commensurate with applicable codes and standards and/or safety basis documents.

Automatic fire detection systems will be provided in new buildings or buildings undergoing major modifications, as determined in Manual 11Q, Procedure 1.12, to the extent required by applicable IBC or NFPA codes and standards for the occupancy and hazard or where considered as part of multiple approaches to protection due to monetary thresholds.

Life safety provisions, such as the means of egress, will be provided in all buildings to satisfy 10 CFR 851, NFPA 101 and IBC (or applicable building code). A means to notify emergency responders and building occupants of a fire will be provided. This will typically include the building fire alarm system, if provided, and/or a public address system. In more remote locations, a remote worker program will handle emergency notification.

Water supplies and distribution systems will be shown through appropriate analysis to be adequate and reliable for fire suppression needs.

Special hazards will be protected by fire protection systems or features, and appropriate procedures to address the fire and related hazards found to be unique to DOE and not addressed by industry codes and standards.

## 12.06

### OPERATIONS

Fire protection operations are implemented through a comprehensive fire protection program. Comprehensive, written fire protection criteria and procedures will be established to implement the fire protection program requirements. These include the following:

- a. Site-specific requirements
- b. Staff organization, resources, training, roles and responsibilities
- c. Inspection, testing and maintenance of fire protection systems
- d. Use and storage of combustible, flammable, radioactive and hazardous materials
- e. Control of "Hot Work"
- f. Identification and tracking of fire protection impairments
- g. Fire prevention measures (combustible control program, ignition source controls, etc.)
- h. Facility Fire Hazards Analyses (FHAs)
- i. Facility Fire Protection Self-Assessment Program
- j. Design and construction oversight, and
- k. A process to develop and submit equivalencies, exemptions and variances for final approval.

To ensure effective implementation of the above elements of the Fire Protection Program, it will include the following:

- a. Access to a qualified and trained staff (including qualified fire protection engineers, fire protection technicians, and fire fighting personnel) to implement the requirements of the program.
- b. Documented reviews for design plans, specifications, procedures, and acceptance tests conducted by or under the supervision of a qualified fire protection engineer that establishes oversight of the fire protection related activities from conceptual design to the final acceptance.
- c. A process to develop and submit for DOE approval any fire protection related equivalencies and exemptions to fire protection requirements. Records of the technical justification will be maintained and reevaluated for appropriateness as the affected activities or operation change.
- d. Sufficient documented level of authority to execute the duties and responsibilities of the authority having

jurisdiction (AHJ) as may be delegated by DOE in accordance with the overall fire protection and emergency response program. These delegated authorities are identified in DOE-SR Letter of Direction OSQA-15-0091 dated April 29, 2015, and included as SRID requirement 12.12.002.

## **12.07 FIRE EMERGENCY RESPONSE**

The fire emergency response capabilities necessary to meet the site needs are captured in a Baseline Needs Assessment (BNA) published by the M&O contractor. The BNA will establish the capabilities needed to provide an effective response to control and extinguish site fires, and provide emergency medical, rescue and hazardous materials response. The BNA will determine minimum staffing, apparatus, facilities, equipment, training, pre-incident plans, mutual agreements, and procedures. The BNA will reflect applicable requirements found in NFPA codes and standards or DOE directives. The BNA will be submitted to SRR for review of SRR facilities information in the BNA. Information from the BNA will be incorporated, as necessary, into SRR emergency plans, FHAs and safety basis documentation.

At a facility level, fire pre-incident plans are developed and maintained by the M&O Contractor to assist fire fighters in recognizing special hazards or features within the facility and special pre-planned methods of suppression. Such preincident plans, strategies and standard operating procedures will be established to enhance the effectiveness of manual fire suppression activities, including areas within or adjacent to moderator controlled areas. Where moderator-controlled areas are included in the associated pre-incident plans and procedures, they will be reviewed by the criticality safety staff.

Physical access and appropriate equipment will be provided to accommodate effective manual firefighting intervention. Criticality safety staff will review and approve any procedures governing the use of fire fighting water or other neutron moderating materials to suppress fire within or adjacent to moderator-controlled areas. Where no alternative exists to criticality safety restrictions on the use of water for fire suppression, the need for such restrictions will be fully documented with written technical justification. Special pre-plans governing firefighting techniques will be used during deactivation, decontamination and demolition phases of a building.

## **12.08 FIRE HAZARDS ANALYSIS**

A facility Fire Hazard Analysis (FHA) will be developed for buildings that are normally occupied or routinely visited using a graded approach for any of the following:

- a. All Hazard Category 1, 2 or 3 facilities and major modifications as determined by Manual 11Q, procedure 1.12
- b. Buildings that represent a unique fire safety risk
- c. New facilities or modifications to existing facilities that have a resulting value greater than \$150 million (in 2012 dollars), or
- d. When directed in writing by the responsible DOE authority.

The facility FHA will be performed by or under the direction of a fire protection engineer. A facility FHA will be reviewed by or under the direction of a fire protection engineer at least every three years and the review documented even if an update is not needed. A facility FHA will be revised to reflect changes to the facility structures or layout, changes to the process or occupancies described in the FHA, changes to the safety basis documents that impact the analysis, or BNA changes that impact the analysis. The facility FHA will be updated to reflect any modification that adds a significant new fire safety risk or the three year review identifies the need for an update.

## 12.09 FIRE PREVENTION BUILDING ASSESSMENTS

DOE-SR letter OSQA-15-0091 dated April 29, 2015, serves as the appropriate justification and approval for a modified SRS Facility Assessment Program with implementation assessment frequencies as follows:

### 1. Annual Facility Assessment

Facility fire protection assessments shall be performed for the following structures:

- 1.1 Facilities with a replacement value in excess of \$100 million (in 2012 dollars) and are occupied routinely by personnel;
- 1.2 Facilities classified as Hazard Category 1 or 2 nuclear operating facilities as identified in Functional Area 00 that are occupied routinely by personnel;
- 1.3 Facilities classified as High Hazard Chemical operating facilities as identified in Functional Area 00 that are occupied routinely by personnel;
- 1.4 Facilities under construction with a replacement value in excess of \$100 million (in 2012 dollars) that have had construction activities suspended and are awaiting new direction from DOE-HQ;
- 1.5 Facilities key to vital DOE programs as specified in writing by Manager, DOE-SR; or
- 1.6 Facilities as directed in writing by the Manager, DOE-SR.

### 2. Three Year Facility Assessment

Facility fire protection assessments shall be performed every three (3) years for the following structures:

- 2.1 Facilities with a replacement value between \$50 million and \$100 million (in 2012 dollars) that are occupied routinely by personnel;
- 2.2 Facilities classified as Radiological or Hazard Category 3 that are occupied routinely by personnel;
- 2.3 Facilities under construction with a replacement value between \$50 million and \$100 million (in 2012 dollars) that have had construction activities suspended and are awaiting new direction from DOE-HQ; or
- 2.4 Facilities as directed in writing by the Manager, DOE-SR.

### 3. Five Year Facility Assessment

Facility fire protection assessments shall be performed every five (5) years for the following structures:

- 3.1 Facilities with a replacement value between \$5 million and less than \$50 million (in 2012 dollars) that are occupied routinely by personnel;
- 3.2 Facilities under construction with a replacement value between \$5 million and less than \$50 million (in 2012 dollars) that have had construction activities suspended and are awaiting new direction from DOE-HQ;
- 3.3 Facilities with a replacement value less than \$5 million (in 2012 dollars) that are occupied routinely by personnel may use a graded approach (including routine assessments performed as part of the fire protection program) and may be performed collectively; or
- 3.4 Facilities as directed in writing by Manager, DOE-SR.

#### 4. Facility Assessments Not Required

Facility fire protection assessments are not required for the following structures:

4.1 Facilities undergoing deactivation, decommissioning or demolition addressed by an approved DOE Deactivation & Demolition plan;

4.2 Facilities not intended for routine occupancy by personnel; and

4.3 Facilities approved in writing by the Manager, DOE-SR.

The above frequencies have been historically approved for the Savannah River Site and have proven to be sufficient. They represent a cost effective and graded approach that includes all the occupiable facilities on the site.

Where used above, the word facility(ies) pertains only to buildings normally occupied or routinely visited by personnel.

## 12.10

### WILDLAND FIRE

In accordance with DOE Order 420.1C, DOE is responsible for establishing an integrated site-wide wildland fire management plan consistent with the Federal Wildland Fire Management Policy. Wildland fire activities are performed by others under an interagency agreement, DE-AI09- 00SR22188/124 (or comparable agreement) with support provided by the M&O contractor. The requirement for an integrated site-wide wildland fire management plan, consistent with the Federal Wildland Fire Management Policy was included in this Functional Area only for completeness because it appears in DOE Order 420.1C, Attachment 2, Chapter II, Section 3g, but it does not apply to SRR. SRR minimizes the risk of wildland fire within SRR boundaries by managing vegetation and transient combustibles.

## 12.11

### SPECIFIC FIRE PROTECTION PROGRAM CRITERIA

The specific design criteria contained in DOE-STD-1066-2012 are considered non-mandatory for existing facilities. Operational requirements in Section 5 and Emergency Response requirements in Section 6, are applicable for existing facilities. For new buildings and major modifications (as defined in Site Manual 11Q, Procedure 1.12 (Major Modification Determination)) to existing buildings, applicable requirements statements (e.g., shall, is required, etc.) in the standard will be considered mandatory unless the exemption or equivalency processes are followed as outlined above. Alternatively, SRR may choose to develop specific criteria for meeting the requirements in the S/RID, acceptable to DOE, and the alternative implementation plan will be adopted using the equivalency process instead of applying DOE-STD-1066-2012.

**12.12 DOCUMENTS****12.12.01 Reference Documents**

10 CFR 851

WORKER SAFETY AND HEALTH PROGRAM, 2/9/2006

DOE LETTER OSQA-14-0044

DOE O 420.1C, Facility Safety, dated 12/4/2012, Request for Concurrence of Interpretations or Additional Guidance (Your letter, dated September 16, 2013) 5/05/2014

DOE LETTER OSQA-15-0091

DOE O 420.1C, Facility Safety, dated December 4, 2012, Delegation of Authority Having Jurisdiction And Facility Assessment Frequencies, 4/29/2015

DOE LETTER OSQA-15-0094

Clarification of DOE Order 420.1C, Admin Change 1, Facility Safety, Attachment 2, Chapter II, Fire Protection, 5/28/2015

DOE LETTER OSQA-15-0122

Further Clarification of DOE Order 420.1C, Change 1, "Facility Safety," Attachment 2, Chapter II, Fire Protection, 8/17/2015

DOEO231.1B-AChg1

ENVIRONMENT, SAFETY AND HEALTH REPORTING ADMIN CHANGE 1, 11/28/2012

DOEO420.1C-Chg1

FACILITY SAFETY (Change 1), 2/27/2015

SRNS-U1000-2013-00102

DOE O 420.1C, Facility Safety, dated 12/4/2012, Request for Concurrence of Interpretation or Additional guidance 9/16/2013

**TABLE 1 FORMAT AND CONTENT**

S/RID Requirement Number	Unique number for each requirement that links the statement to the ES&H Configuration Guide
Source Document	Number of the source document
Source Document Requirement Number	Unique reference from the source document.
Requirement Text	Requirement statement

**Facility Categories \***

Requirement applicability is shown in relation to the following facility categories:

Nuclear HC-1,2,3	Representing nuclear hazard category 1, 2 and 3 facilities (as defined by DOE Standard 1027-92) and includes any facility(s) required to support a nuclear facility(s).
Radiological	Representing facilities below Hazard Category 3 but still contain quantities of radioactive material at or above the Reportable Quantity value as specified in 40 CFR 302.4, Appendix B.
High Hazard Chemical	Representing facilities with radiological hazards below 40 CFR 302.4 thresholds for radiological materials, but with any chemical hazard at or above threshold quantities listed in 29 CFR 1910.119 or 40 CFR 68. These facilities may also contain nuclear materials exempt from the nuclear facility definition, e.g., check and calibration sources, radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and x-ray machines, as defined by 10 CFR 830.3.
Low Hazard Chemical	Representing facilities with radiological hazards below 40 CFR 302.4 thresholds, but with chemical hazards both below 29 CFR 1910.119 or 40 CFR 68 thresholds and at or above reportable quantities in 40 CFR 302.4. These facilities may also contain nuclear materials exempt from the nuclear facility definition, e.g., check and calibration sources, radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and x-ray machines, as defined by 10 CFR 830.3.
Other Industrial	Representing facilities with all radiological and chemical hazards below 40 CFR 302.4 thresholds. These facilities may also contain nuclear materials exempt from the nuclear facility definition, e.g., check and calibration sources, radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and x-ray machines, as defined by 10 CFR 830.3.
Facility Specific	These are requirements that are applicable to specific facilities. Facility identification is included in this column, when applicable.

**Phase I Compliance Approach**

Common	Implementation of these requirements is covered by common procedures and policies.
Facility Specific	Implementation of these requirements is covered by facility specific procedures.

\* Refer to the "SRR Facilities List" contained in Functional Area 00 for the category for specific SRR facilities/ bldgs.

**TABLE 1 - S/RID FUNCTIONAL AREA 12 (FIRE PROTECTION) REQUIREMENTS**

S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.00.008	10 CFR 851	Sub.C.App.A. 2(a)	<p>Worker Safety and Health Functional Areas</p> <p>This appendix establishes the mandatory requirements for implementing the applicable functional areas required by paragraph 851.24.</p> <p>Fire Protection</p> <p>Contractors must implement a comprehensive fire safety and emergency response program to protect workers commensurate with the nature of the work that is performed. This includes appropriate facility and site-wide fire protection, fire alarm notification and egress features, and access to a fully staffed, trained, and equipped emergency response organization that is capable of responding in a timely and effective manner to site emergencies.</p> <p>Note: Paragraph 851.24 is provided as S/RID requirement number 01.04.162.</p>	X	X	X	X	X		X	
12.00.009	10 CFR 851	Sub.C.App.A. 2(b)	<p>Worker Safety and Health Functional Areas</p> <p>This appendix establishes the mandatory requirements for implementing the applicable functional areas required by paragraph 851.24.</p> <p>Fire Protection</p> <p>An acceptable fire protection program must include those fire protection criteria and procedures, analyses, hardware and systems, apparatus and equipment, and personnel that would comprehensively ensure that the objective in paragraph 2(a) of this section is met. This includes meeting applicable building codes and National Fire Protection Association codes and standards.</p> <p>Note: Paragraph 851.24 is provided as S/RID requirement number 01.04.162.</p>	X	X	X	X	X		X	

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S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.00.010	DOEO420.1C-CHG1	Att. 2.Ch. II.1.	<p>1. OBJECTIVE</p> <p>To establish requirements for comprehensive fire protection programs for DOE facilities and emergency response organizations to:</p> <p>a. Minimize the likelihood of occurrence of a fire-related event;</p> <p>b. Minimize the consequence of a fire-related event affecting the public, workers, environment, property and missions; and,</p> <p>c. Provide a level of safety protection consistent with the “highly protected risk” class of industrial risks.</p> <p>Modified for SRR use by SRNS-U1000-2013-00102 and OSQA-14-0044: The term “highly protected risk” (HPR) is considered to be fire protection sufficient to satisfy monetary loss limits established in Att. 2, Chapter II, Section 3.c(2) of DOE O 420.1C.</p>	X	X	X	X	X		X	
12.01.035	DOEO420.1C-CHG1	Att. 2.Ch. II.2.	<p>2. APPLICABILITY</p> <p>This chapter applies to organizations that have responsibility for the design, construction, maintenance, or operation of government-owned or government-leased facilities and on-site contractor-leased facilities used for DOE mission purposes.</p> <p>For leased facilities that are not nuclear hazard category 1, 2, or 3 facilities, the design requirements of Section 3.c of this chapter apply to the extent determined by the field element. (Note: DOE-STD-1066-2012, Fire Protection, provides guidance on a graded approach to fire protection for leased facilities.)</p> <p>Modified for SRR use by SRNS-U1000-2013-00102 and OSQA-14-0044: The requirements of this order will not apply to non-nuclear leased facilities located off-site unless specifically directed by the field office. Unless otherwise stated, the requirements of the local jurisdiction will apply instead.</p>	X	X	X	X	X		X	
12.02.008	DOEO420.1C-CHG1	Att. 2.Ch. II.3.a.(1).	<p>3. REQUIREMENTS.</p> <p>a. General Fire Protection Program Requirements.</p> <p>(1) Policy Statement. A policy must be established that affirms the contractor’s commitment to provide a comprehensive fire protection and emergency response program that meets the requirements of this chapter, related DOE directives, and other applicable requirements.</p>	X	X	X	X	X		X	

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12.02.009	DOEO420.1C-CHGI	Att. 2.Ch. II.3.a.(2).(a-b).	<p>3. REQUIREMENTS.</p> <p>a. General Fire Protection Program Requirements.                      (2) Codes and Standards. The applicable building code and National Fire Protection Association (NFPA) codes and standards must be identified in the fire protection and emergency response programs. (Note: see Attachment 1, Section 2 for obtaining equivalencies and exemptions to the applicable codes and standards).</p> <p>Modified for SRR use by SRNS-U1000-2013-00102 and OSQA-14-0044: New facilities and major modifications as defined in Site Standard 01120 and Procedure 11Q 1.12 (Major Modification Determination) to existing facilities will be designed, constructed and maintained in accordance with the set of codes established as the Code of Record (COR) for that new facility or major modification. Modifications (not major mods) to existing facilities will, at a minimum, comply with the codes and standards applicable to the systems, structures and components (SSCs) being modified but have the option of using the latest code or standard as outlined in SRS Manual E7 and Engineering Standards Manual WSRC-TM-95-1. Where subsequent editions of the codes and standards are issued, only those requirements explicitly stated as applicable to existing facilities will apply.</p> <p>(a) Facilities and major modifications thereto, must be constructed to meet applicable codes and standards that are in effect when design criteria are approved (otherwise known as the code of record, or COR). Other facility changes must meet the most recent applicable codes and standards to the extent determined by the authority having jurisdiction (AHJ).</p> <p>(b) Provisions of subsequent editions of codes or standards (promulgated after the COR is established) are mandatory only to the extent that they are explicitly stated to be applicable to existing facilities.</p>	X	X	X	X	X		X	

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S/RID Requirement Number	Source Document	Source Document Req# Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.02.010	DOEO420.1C-CHGI	Att. 2.Ch. II.3.a.(2).(c).	<p>3. REQUIREMENTS.</p> <p>a. General Fire Protection Program Requirements.</p> <p>(c) Conflicts between DOE O 420.1C, NFPA codes and standards, and the applicable building code must be resolved as follows:</p> <p>1 Requirements of DOE O 420.1C take precedence over all NFPA and building code requirements and are subject to the relief requirements of DOE O 420.1C.</p> <p>2 Conflicts between NFPA requirements and the applicable building code requirements are resolved by the head of the field element following consultation with designated building code and fire protection subject matter experts.</p> <p>Modified for SRR use by SRNS-U1000-2013-00102 and OSQA-14-0044: Where conflicts arise between National Fire Protection Association (NFPA) requirements and the International Building Code (IBC), SRR will establish a position and submit the conclusion to the head of the field office (DOE-SR) for concurrence through a formal process established by both parties.</p>	X	X	X	X	X		X	
12.02.022	DOEO231.1B-AChg1	Att.1.2.b	<p>2. Reporting Occupational Safety and Health Information</p> <p>b. Annual Fire Protection Summary Information</p> <p>Contractors must submit annual fire protection summary information to the Head of the DOE organization in accordance with Attachment 3, paragraph 3 if responsible for maintaining property under the stewardship of DOE, including the Administrator, NNSA.</p>	X	X	X	X	X		X	
12.02.023	DOEO231.1B-AChg1	Att.3.3	<p>Reporting Occupational Safety and Health Information</p> <p>3. Annual Fire Protection Summary Information</p> <p>A summary of fire protection information for the preceding year must be submitted to the fire protection database by April 30 in accordance with the Annual Fire Protection Summary Information Reporting Guide located at: <a href="http://www.hss.doe.gov/CSA/CSP/qaps/Annual_Fire_Protection_Summary_Information_Reporting_Guide.pdf">http://www.hss.doe.gov/CSA/CSP/qaps/Annual_Fire_Protection_Summary_Information_Reporting_Guide.pdf</a>.</p>	X	X	X	X	X		X	

TABLE 1 - S/RID FUNCTIONAL AREA 12 (FIRE PROTECTION) REQUIREMENTS

S/RID Requirement Number	Source Document	Source Document Req# Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.03.001	DOEO420.1C-CHG1	Att. 2.Ch. II.3.b.(1).	<p>3. REQUIREMENTS.</p> <p>b. Fire Protection Program Administration.</p> <p>(1) Documentation. A documented fire protection program that includes the elements and requirements identified in this chapter for design, operations, emergency response, fire analysis and assessments, wildland fire, and specific fire protection program criteria must be developed, implemented, and maintained by the contractor. Contractor must submit this documented fire protection program to the DOE field element for review and approval (note: this may be accomplished in conjunction with submittals required by 10 C. F. R. Part 851, Worker, Health and Safety Program).</p>	X	X	X	X	X		X	
12.03.002	DOEO420.1C-CHG1	Att. 2.Ch. II.3.b.(2).	<p>3. REQUIREMENTS.</p> <p>b. Fire Protection Program Administration.</p> <p>(2) Self-Assessments. A documented comprehensive self-assessment of the fire protection program must be performed at least every three years, or at a frequency with appropriate justification approved by the DOE head of field element.</p>	X	X	X	X	X		X	
12.04.004	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(1).	<p>3. REQUIREMENTS.</p> <p>c. Design.</p> <p>(1) Design Process. A process must be established to ensure that fire protection program requirements are documented and incorporated into plans and specifications for design of new facilities and modifications to existing facilities.</p>	X	X	X	X	X		X	
12.04.005	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(2).(a).	<p>3. REQUIREMENTS.</p> <p>c. Design.</p> <p>(2) Protection Thresholds.</p> <p>(a) New facilities (non-relocatable) exceeding 5,000 sq ft of floor area must be of Type I or Type II construction, as defined in the applicable building codes.</p>	X	X	X	X	X		X	

**TABLE 1 - S/RID FUNCTIONAL AREA 12 (FIRE PROTECTION) REQUIREMENTS**

S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.04.006	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(2),(b).	<p>3. REQUIREMENTS.</p> <p>c. Design.</p> <p>(2) Protection Thresholds.</p> <p>(b) Automatic fire suppression systems must be provided throughout new facilities exceeding 5,000 sq ft of floor area or where a maximum possible fire loss exceeds \$5 million (in 2012 dollars), unless the NFPA code(s) allow for specific relief within the facility.</p> <p>Modified for SRR use by OSQA-15-0094: Where used in this requirement, the word facility(ies) is intended only for building(s) that are normally occupied or routinely visited (e.g., for storage, maintenance, testing, or inspection) by personnel. Examples of buildings or structures <u>not</u> intended for personnel use or rarely accessed include Sand Filters, Stacks, Storage Tanks, etc.</p>	X	X	X	X	X		X	

TABLE 1 - S/RID FUNCTIONAL AREA 12 (FIRE PROTECTION) REQUIREMENTS

S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.04.007	DOEO420.1C-CHGI	Att. 2.Ch. II.3.c.(2).(c).	<p>3. REQUIREMENTS.</p> <p>c. Design.</p> <p>(2) Protection Thresholds.</p> <p>(c)Automatic fire suppression systems must be provided throughout facilities in which any of the following conditions exist:</p> <p>1 where required by safety basis document (for example, to prevent loss of safety functions or provide defense-in-depth);</p> <p>2 significant life safety hazards;</p> <p>Modified for SRR use by SRNS-U1000-2013-00102 and OSQA-14-0044: "Significant life safety hazards" refers to conditions where NFPA 101 or the applicable model building code requires automatic fire extinguishing systems for partial or complete protection.</p> <p>3 where fire may cause unacceptable mission or program interruption if automatic fire suppression systems are not provided;</p> <p>Modified for SRR use by SRNS-U1000-2013-00102 AND OSQA-14-0044: Unacceptable mission or program interruption is considered only where identified in writing by DOE. It is understood that DOE and SRR will establish a process for communicating when there is a mission or program that could have an unacceptable interruption. Currently, there are no missions or programs at SRS that fall into this category. Such a classification may necessitate a Fire Hazards Analysis (FHA), if not already required for other reasons.</p> <p>4 where a modification to an existing facility would cause the maximum possible fire loss (MPFL) to exceed \$5 million (in 2012 dollars) for the facility; or,</p> <p>5 where a modification to an existing facility results in facility floor area that exceeds 5,000 sq ft .</p> <p>Modified for SRR use by OSQA-15-0094: Where used in this requirement, the word facility(ies) is intended only for building(s) that are normally occupied or routinely visited (e.g., for storage, maintenance, testing, or inspection) by personnel. Examples of buildings or structures <u>not</u> intended for personnel use or rarely accessed include Sand Filters, Stacks, Storage Tanks, etc.</p>	X	X	X	X	X		X	

TABLE 1 - S/RID FUNCTIONAL AREA 12 (FIRE PROTECTION) REQUIREMENTS

S/RID Requirement Number	Source Document	Source Document Req# Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.04.008	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(2).(d).	3. REQUIREMENTS.  c. Design. (2) Protection Thresholds. (d) For property protection, multiple fire protection approaches, such as a fire suppression system and a fire detection and alarm system, must be provided in areas where the MPFL exceeds \$150 million (in 2012 dollars) (refer to DOE-STD-1066-2012).	X	X	X	X	X		X	
12.04.009	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(2).(e).	3. REQUIREMENTS.  c. Design. (2) Protection Thresholds. (e) For property protection, fire areas must be established such that the MPFL for each fire area does not exceed \$350 million (in 2012 dollars). Fire area walls or other separation approaches may be used to meet this requirement.	X	X	X	X	X		X	
12.05.001	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(3).(a).	3. REQUIREMENTS.  c. Design. (3) Fire Protection and Life Safety Systems. (a) Fire Suppression. The inadvertent operation or failure of fire suppression systems must not result in the loss of function of safety-class or safety-significant systems. (Note: This requirement addresses proper design of the fire suppression system to ensure it does not impact safety systems and is not intended to drive need for redundancy in safety-significant system design.)	X	X	X	X	X		X	
12.05.002	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(3).(b).	3. REQUIREMENTS.  c. Design. (3) Fire Protection and Life Safety Systems. (b) Fire Barriers. Complete fire-rated construction and barriers, commensurate with the applicable codes and/or safety basis requirements, must be provided to isolate hazardous areas and minimize fire spread and loss potential consistent with limits as established in this chapter. Fire barrier locations and construction must be documented.	X	X	X	X	X		X	
12.05.003	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(3).(c).	3. REQUIREMENTS.  c. Design. (3) Fire Protection and Life Safety Systems. (c) Fire Detection. Automatic fire detection must be provided to the extent required by applicable industry codes and standards.	X	X	X	X	X		X	

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S/RID Requirement Number	Source Document	Source Document Req# Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.05.004	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(3).(d).	<p>3. REQUIREMENTS.</p> <p>c. Design.</p> <p>(3) Fire Protection and Life Safety Systems.</p> <p>(d) Life Safety. Requirements for life safety and means of egress are provided in 10 C.F.R. Part 851, Worker Health and Safety Program. Other codes and standards, such as the International Building Code, and NFPA 101, Life Safety Code, may also be applicable.</p>	X	X	X	X	X		X	
12.05.005	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(3).(e).	<p>3. REQUIREMENTS.</p> <p>c. Design.</p> <p>(3) Fire Protection and Life Safety Systems.</p> <p>(e) Water Supply and Distribution. A reliable and adequate water supply and distribution system must be provided for DWPF fire suppression, as documented through appropriate analysis.</p> <p>NOTE: Fire Water supply for SRR facilities other than DWPF is provided by the M&amp;O contractor.</p>	X	X	X	X	X		X	
12.05.006	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(3).(f).	<p>3. REQUIREMENTS.</p> <p>c. Design.</p> <p>(3) Fire Protection and Life Safety Systems.</p> <p>(f) Emergency Notification. A means to notify responders and building occupants of a fire must be provided (e.g., fire alarm signaling system and/or site-wide mass notification capabilities for major incidents affecting the site).</p> <p>Modified for SRR use by SRNS-U1000-2013-00102 and OSQA-14-0044: Buildings typically have a fire alarm system and/or a public address system to notify workers of emergency situations such as a fire. SRS has a remote worker program for notification of persons in remote areas of the site. Since those 'controls' exist, any additional mass notification system is not mandatory.</p>	X	X	X	X	X		X	
12.05.007	DOEO420.1C-CHG1	Att. 2.Ch. II.3.c.(4).	<p>3. REQUIREMENTS.</p> <p>c. Design.</p> <p>(4) Special Hazards. Fire protection systems or features, and appropriate procedures to address fire and related hazards that are special or unique to DOE and not addressed by industry codes and standards, must be established.</p>	X	X	X	X	X		X	

**TABLE 1 - S/RID FUNCTIONAL AREA 12 (FIRE PROTECTION) REQUIREMENTS**

S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.06.001	DOEO420.1C-CHGI	Att. 2.Ch. II.3.d.(1).	<p>3. REQUIREMENTS.</p> <p>d. Operations.</p> <p>(1) Criteria and Procedures. Comprehensive, written fire protection criteria and procedures must be established to implement the fire protection program requirements that include:</p> <p>(a) site-specific requirements;</p> <p>(b) staff organization, resources, training, roles and responsibilities;</p> <p>(c) inspection, testing, and maintenance of fire protection systems;</p> <p>(d) use and storage of combustible, flammable, radioactive, and hazardous materials;</p> <p>(e) a "hot-work" control program;</p> <p>(f) identification and tracking of fire protection system impairments;</p> <p>(g) fire prevention measures (e.g., combustible loading, hot-work, and ignition source controls);</p> <p>(h) facility and fire hazard analysis (FHA) assessment programs;</p> <p>(i) design and construction oversight; and,</p> <p>(j) equivalencies, exemptions, modifications, and variances processes.</p>	X	X	X	X	X		X	

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				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.06.002	DOEO420.1C-CHG1	Att. 2.Ch. II.3.d.(2).	<p>3. REQUIREMENTS.</p> <p>d. Operations.</p> <p>(2) Implementation. To ensure effective implementation of these requirements, the following elements must be addressed.</p> <p>(a) Staffing. The contractor must ensure it has access to qualified, trained fire protection staff (that includes fire protection engineers, technicians, and fire fighting personnel) needed to implement the requirements of this chapter.</p> <p>(b) Design Review. Documented review of plans, specifications, procedures, and acceptance tests must be conducted by a fire protection engineer (FPE) (Note: A definition for FPE is provided in DOE-STD-1066-2012). A process must be established to oversee fire protection-related activities from conceptual design to final acceptance.</p> <p>Modified for SRR use by SRNS-U1000-2013-00102 and OSQA-14-0044: Documented design review of plans, specifications, procedures, and acceptance tests will be conducted by or under the supervision of a fire protection engineer satisfying the qualifications outlined in DOE-STD-1066-2012.</p> <p>(c) Equivalencies and Exemptions. A process must be established for developing and requesting DOE AHJ approval of fire protection equivalencies and exemptions to fire protection requirements. Records of technical justification must be maintained and reevaluated for appropriateness as activities or operations change.</p> <p>(d) Assigned Authority. If assigned, the contractor must document the level of authority to execute the duties and responsibilities of the AHJ, in accordance with the contractor's overall fire protection and emergency response programs.</p> <p>Modified for SRR use: DOE-SR letter OSQA-15-0091 assigns level of authority for authority having jurisdiction (AHJ). See S/RID requirement number 12.12.002.</p>	X	X	X	X	X		X	

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				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.07.001	DOEO420.1C-CHG1	Att. 2.Ch. II.3.e.(1).	<p>3. REQUIREMENTS.</p> <p>e. Emergency Response. Provide emergency response capabilities, as necessary, to meet site needs as established by the baseline needs assessment (BNA), safety basis requirements, and applicable regulations, codes and standards.</p> <p>(1) Baseline Needs Assessment. A BNA of the fire protection and emergency response organization must be conducted and the BNA must:</p> <p>(a) establish capabilities to provide:</p> <p>1 effective response to extinguish fires;</p> <p>2 emergency medical, rescue and hazardous materials response; and,</p> <p>3 staffing, apparatus, facilities, equipment, training, pre-incident plans, mutual aid, and procedures.</p> <p>(b) reflect applicable requirements of NFPA codes and standards, and DOE direction;</p> <p>(c) be submitted to the DOE field element for approval;</p> <p>(d) be reviewed at least every three years, or whenever a significant new hazard that is not covered by the current BNA is introduced, and be updated as appropriate (Note: If no update is necessary, this result must be documented following the review); and,</p> <p>(e) be incorporated into site emergency plans, FHAs, and safety basis documentation.</p> <p>Note: BNA is developed and maintained by the M&amp;O Contractor.</p>	X	X	X	X	X		X	
12.07.002	DOEO420.1C-CHG1	Att. 2.Ch. II.3.e.(2).	<p>3. REQUIREMENTS.</p> <p>e. Emergency Response. Contract emergency response capabilities, as necessary, to meet site needs as established by the baseline needs assessment (BNA), safety basis requirements, and applicable regulations, codes and standards.</p> <p>(2) Pre-Incident Plans. Pre-incident strategies, plans, and standard operating procedures must be established by the M&amp;O contractor to enhance the effectiveness of manual fire suppression activities, including areas within or adjacent to, moderator-controlled areas. The criticality safety staff must review pre-incident plans and procedures related to moderator-controlled areas.</p> <p>Note: Fire Pre-Plans are developed and maintained by the M&amp;O Contractor.</p>	X	X	X	X	X		X	

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				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.07.003	DOEO420.1C-CHG1	Att. 2.Ch. II.3.e.(3).	<p>3. REQUIREMENTS.</p> <p>e. Emergency Response. Contract emergency response capabilities, as necessary, to meet site needs as established by the baseline needs assessment (BNA), safety basis requirements, and applicable regulations, codes and standards.</p> <p>(3) Manual Fire Suppression Activities.</p> <p>(a) Physical access and appropriate equipment that is accessible for effective manual fire fighting intervention must be provided.</p> <p>(b) Procedures governing the use of fire fighting water or other neutron moderating materials to suppress fire within, or adjacent to, moderation controlled areas must be established and reviewed by a criticality subject matter expert prior to release.</p> <p>(c) Procedures governing fire fighting techniques to be used during deactivation, decontamination, and demolition phases, must be established, when applicable.</p> <p>(d) Where no alternative exists to criticality safety restrictions on the use of water for fire suppression, the need for such restrictions must be fully documented with written technical justification.</p> <p>Note: Manual Fire Suppression Activities are provided by the M&amp;O Contractor (i.e., SRSFD).</p>	X	X	X	X	X		X	
12.08.001	DOEO420.1C-CHG1	Att. 2.Ch. II.3.f.(1).[1].	<p>3. REQUIREMENTS.</p> <p>f. Fire Hazard Analyses and Facility Assessments.</p> <p>(1). [1]. Fire Hazards Analyses. FHAs, using a graded approach, must be conducted for the following cases:</p> <p>(1) all hazard category 1, 2, and 3 nuclear facilities and major modifications thereto;</p> <p>(2) facilities that represent unique fire safety risks;</p> <p>(3) new facilities or modifications to existing facilities with value greater than \$150 million (in 2012 dollars); and</p> <p>(4) when directed by the responsible DOE authority.</p> <p>Modified for SRR use by OSQA-15-0094: Where used in this requirement, the word facility(ies) is intended only for building(s) that are normally occupied or routinely visited (e.g., for storage, maintenance, testing, or inspection) by personnel. Examples of buildings or structures <u>not</u> intended for personnel use or rarely accessed include Sand Filters, Stacks, Storage Tanks, etc. Footnote of (3) omitted.</p>	X	X	X	X	X		X	

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				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.08.002	DOEO420.1C-CHG1	Att. 2.Ch. II.3.f.(1).[2].	<p>3. REQUIREMENTS.</p> <p>f. Fire Hazard Analyses and Facility Assessments.</p> <p>(1). [2]. Fire Hazards Analyses. The FHAs must be:                      (a) performed under the direction of an FPE;                      (b) reviewed every three years by an FPE and revised as appropriate (Note: If no revision is necessary, this result must be documented following the review);                      (c) revised when—                      1 changes to the facility structure or layout, processes, occupancy, safety basis documentation or BNA impacts the analysis in the FHA;                      2 a modification to an associated facility or process adds a significant new fire safety risk; or,                      3 the periodic (three-year) review identifies the need for changes;                      (d) integrated into safety basis documentation.</p> <p>Modified for SRR use by SRNS-U1000-2013-00102 and OSQA-14-0044: The required three year review will be done by or under the direction of the FPE, similar to the performance of the FHA.</p> <p>Modified for SRR use by OSQA-15-0094: Where used in this requirement, the word facility(ies) is intended only for building(s) that are normally occupied or routinely visited (e.g., for storage, maintenance, testing, or inspection) by personnel. Examples of buildings or structures <u>not</u> intended for personnel use or rarely accessed include Sand Filters, Stacks, Storage Tanks, etc.</p>	X	X	X	X	X		X	
12.09.001	DOEO420.1C-CHG1	Att. 2.Ch. II.3.f.(2).	<p>3. REQUIREMENTS.</p> <p>f. Fire Hazard Analyses and Facility Assessments.</p> <p>(2) Facility Assessments. Fire protection assessments must be conducted:                      (a) annually, or at a frequency with appropriate justification approved by the DOE head of field element, for facilities with a replacement value in excess of \$100 million (in 2012 dollars), facilities considered a high hazard, or those in which vital programs are involved, as defined by the responsible DOE authority; and,                      (b) at least every three years, or at a frequency with appropriate justification approved by the DOE head of field element, for remaining low and ordinary hazard facilities.</p> <p>Modified for SRR use by DOE-SR letter OSQA-15-0091 as documented in SRID requirements 12.09.002 through 12.09.005.</p>	X	X	X	X	X		X	

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S/RID Requirement Number	Source Document	Source Document Req# Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.09.002	DOEO420.1C-CHG1	Att. 2.Ch. II.3.f.(2).[1].	<p>SRR Facility Assessment Frequencies</p> <p>1. Annually Facility Assessment Facility fire protection assessments shall be performed for the following structures:</p> <p>1.1 Facilities with a replacement value in excess of \$100 million (in 2012 dollars) and are occupied routinely by personnel;</p> <p>1.2 Facilities classified as Hazard Category 1 or 2 nuclear operating facilities as identified in Functional Area 00 that are occupied routinely by personnel;</p> <p>1.3 Facilities classified as High Hazard Chemical operating facilities as identified in Functional Area 00 that are occupied routinely by personnel;</p> <p>1.4 Facilities under construction with a replacement value in excess of \$100 million (in 2012 dollars) that have had construction activities suspended and are awaiting new direction from DOE-HQ;</p> <p>1.5 Facilities key to vital DOE programs as specified in writing by Manager, DOE-SR; or</p> <p>1.6 Facilities as directed in writing by the Manager, DOE-SR.</p> <p>Modified for SRR use by DOE-SR letter OSQA-15-0091.</p> <p>Modified for SRR use by OSQA-15-0094: Where used in this requirement, the word facility(ies) is intended only for building(s) that are normally occupied or routinely visited (e.g., for storage, maintenance, testing, or inspection) by personnel. Examples of buildings or structures <u>not</u> intended for personnel use or rarely accessed include Sand Filters, Stacks, Storage Tanks, etc.</p>	X	X	X	X	X		X	

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S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.09.003	DOEO420.1C-CHG1	Att. 2.Ch. II.3.f.(2).[2].	<p>SRR Facility Assessment Frequencies</p> <p>2. Three Year Facility Assessment Facility fire protection assessments shall be performed every three (3) years for the following structures:</p> <p>2.1 Facilities with a replacement value between \$50 million and \$100 million (in 2012 dollars) that are occupied routinely by personnel;</p> <p>2.2 Facilities classified as Radiological or Hazard Category 3 that are occupied routinely by personnel;</p> <p>2.3 Facilities under construction with a replacement value between \$50 million and \$100 million (in 2012 dollars) that have had construction activities suspended and are awaiting new direction from DOE-HQ; or</p> <p>2.4 Facilities as directed in writing by the Manager, DOE-SR.</p> <p>Modified for SRR use by DOE-SR letter OSQA-15-0091.</p> <p>Modified for SRR use by OSQA-15-0094: Where used in this requirement, the word facility(ies) is intended only for building(s) that are normally occupied or routinely visited (e.g., for storage, maintenance, testing, or inspection) by personnel. Examples of buildings or structures <u>not</u> intended for personnel use or rarely accessed include Sand Filters, Stacks, Storage Tanks, etc.</p>	X	X	X	X	X		X	

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S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.09.004	DOEO420.1C-CHG1	Att. 2.Ch. II.3.f.(2).[3].	<p>SRR Facility Assessment Frequencies</p> <p>3. Five Year Facility Assessment Facility fire protection assessments shall be performed every five (5) years for the following structures:</p> <p>3.1 Facilities with a replacement value between \$5 million and less than \$50 million (in 2012 dollars) that are occupied routinely by personnel;</p> <p>3.2 Facilities under construction with a replacement value between \$5 million and less than \$50 million (in 2012 dollars) that have had construction activities suspended and are awaiting new direction from DOE-HQ;</p> <p>3.3 Facilities with a replacement value less than \$5 million (in 2012 dollars) that are occupied routinely by personnel may use a graded approach (including routine assessments performed as part of the fire protection program) and may be performed collectively; or</p> <p>3.4 Facilities as directed in writing by the Manager, DOE-SR.</p> <p>Modified for SRR use by DOE-SR letter OSQA-15-0091.</p> <p>Modified for SRR use by OSQA-15-0094: Where used in this requirement, the word facility(ies) is intended only for building(s) that are normally occupied or routinely visited (e.g., for storage, maintenance, testing, or inspection) by personnel. Examples of buildings or structures <u>not</u> intended for personnel use or rarely accessed include Sand Filters, Stacks, Storage Tanks, etc.</p>	X	X	X	X	X		X	





**TABLE 1 - S/RID FUNCTIONAL AREA 12 (FIRE PROTECTION) REQUIREMENTS**

S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.12.002	DOE LETTER OSQA-15-0091	AHJ	<p>Delegation of Authority Having Jurisdiction and Facility Assessment Frequencies</p> <p>Authority Having Jurisdiction: Various requirements in the Standards/Requirements Identification Requirements and referenced codes and standards refer to AHJ. Except for facilities for which SRR has no contractual obligations to, SRR shall perform the AHJ duties listed below. The Department of Energy - Savannah River (DOE-SR), however, retains the full AHJ authority and responsibility and dispatch that responsibility by selective monitoring of SRR activities.</p> <p>DOE-SR has elected to delegate the following fire protection related AHJ duties and responsibilities to SRR. The following duties shall be performed by or under the supervision of a qualified SRR fire protection engineer and in a documented and auditable format:</p> <ol style="list-style-type: none"> <li>1. Conduct design reviews and approval of projects and facility modifications as they affect site fire protection requirements;</li> <li>2. Review and approval of new fire system installations (active and passive);</li> <li>3. Perform detailed fire safety acceptance inspections for approval of occupancy of new facilities or those facilities that have undergone major modifications; and</li> <li>4. Prepare and submit engineering evaluations to DOE-SR for subsequent disposition as an equivalency, exemption, or variances. Note: Fire protection engineering position papers and technical code interpretations shall be developed and submitted for information to DOE-SR.</li> </ol>	X	X	X	X	X		X	

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S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1,2,3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
12.12.002 (Continued)	DOE LETTER OSQA-15-0091	AHJ	<p>Delegation of Authority Having Jurisdiction and Facility Assessment Frequencies</p> <p>The following duties shall be performed by qualified fire protection technicians in a documented and auditable format:</p> <ol style="list-style-type: none"> <li>1. Perform fire system acceptance testing or witness and approve such acceptance testing by an outside certified competent personnel;</li> <li>2. Perform periodic inspection, testing and maintenance of fire systems/components or witness and approve fire system procedures that are conducted by an outside certified competent personnel; and</li> <li>3. Maintain a central record of impairments to active fire protection systems (alarm, detection and suppression) in lieu of written AHJ notification, where required by National Fire Protection Association codes and standards.</li> </ol> <p>For modified assessment frequencies see SRID 12.09.001 through 12.09.005 in this document.</p>	X	X	X	X	X		X	