U.S. Department of Energy Office of Safety and Emergency Management Evaluations Criteria Review and Approach Document	Subject: Fire Protection Inspection Criteria, Approach, and Lines of Inquiry Acting Director, Office of Safety and Emergency Management Evaluations Date: 10/12/12 Criteria Lead, Fire Protection Date: 10/12/12	HS: HSS CRAD 45-34 Rev: 1 Eff. Date: 10/12/2012 Page 1 of 13

1.0 PURPOSE

Within the Office of Health, Safety and Security (HSS), the Office of Safety and Emergency Management Evaluations' (HS-45) mission is to assess the effectiveness of those environment, safety and health systems and practices used by field organizations in implementing Integrated Safety Management (ISM) and to provide clear, concise, and independent evaluations of performance in protecting our workers, the public, and the environment from the hazards associated with Department of Energy (DOE) activities and sites.

A key to success is the rigor and comprehensiveness of our process; and as with any process, we continually strive to improve and provide additional value and insight to field operations. Integral to this is our commitment to enhance our program. We continue to make them available for use by DOE line and contractor assessment personnel in developing and implementing effective DOE oversight and contractor self-assessment and corrective action processes; the current revision is available at http://www.hss.doe.gov/indepoversight/safety_emergencymgt/guidance.html.

This document will be used to collect information to assess fire protection of DOE facilities. Attention will be given to onsite activities governed by DOE Order 420.1B, National Fire Protection Association (NFPA) codes and standards, and implementation guides 420.1 and 440.1, Fire Safety Program, to the extent to which these documents are required by contract.

Necessary reviews of policies, procedures, written programs, and fire protection engineered design features will ensure that fire programs have been implemented to meet DOE's objectives for minimizing the potential for the occurrence of a fire or related event causing an unacceptable onsite or offsite release of hazardous or radiological material, property loss limits or damage critical process controls and safety class systems, structures, and components.

2.0 APPLICABILITY

The following Inspection Criteria document is approved for use by the Office of Safety and Emergency Management Evaluations.

3.0 FEEDBACK

Comments and suggestions for improvements on these Inspection Criteria, Approach, and Lines of Inquiry can be directed to the Acting Director of the Office of Safety and Emergency Management Evaluations on (301) 903-5392.

Fire Protection Inspection Criteria, Approach, and Lines of Inquiry

Major assessment areas for fire protection include:

I. Programmatic Elements
II. Fire Hazard Analysis/Documented Safety Analysis Integration
III. Engineered System Design Features
IV. TSR Surveillance and Testing
V. Configuration Management

The following are typical inspection activities that will apply to all of the Inspection Criteria listed below and will be performed to collect information during the inspection.

Inspection Activities: Review fire protection system design and defense in-depth strategies. Interviews shall be conducted of personnel including fire engineers, fire coordinators, fire system technicians, facility operations personnel, and fire department personnel. Review policies, procedures, fire hazards analyses, and safety basis documentation. Additionally, perform facility building walk downs and inspections, and observe selected work activities, such as hot work, fire system impairments, combustible storage practices, dispensing flammable liquids, maintenance and testing of fire protection system components, and response to facility fire drills.

I. Programmatic Elements

A policy statement incorporates fire protection requirements, staff organization, training and the responsibilities for design, installation, operability, and inspection, testing, and maintenance (ITM) requirements. Fire protection requirements shall be documented including plans and specifications for new facilities and significant modification to existing facilities. Examples of documentation should include specifications, procedures, and acceptance tests by a qualified fire protection engineer.

Fire hazards shall be analyzed using a graded approach for all hazard category 1, 2, and 3 nuclear facilities, significant new facilities, and those representing a unique fire safety risk as determined by the Authority Having Jurisdiction. Conclusions shall be consistently documented in the Fire Hazards Analysis and the facility Safety Basis (Preliminary Safety Design Report, Preliminary Design Safety Analysis, or Design Safety Analysis as applicable) and integrated into the design basis and accident analysis. Exemption, equivalencies, and variances for such buildings should be documented with appropriate compensatory actions plans.

The Fire Protection program includes requirements for the use and storage of combustible, flammable, radioactive and hazardous materials that minimize the risk from fire, fire protection system impairments, smoking and hot work, safety operation of process equipment, and prevention measures to decrease the risk of fire. Formal assessments shall be completed and documented based on the monetary value of the facilities and the respective frequency.

FP-1: Program Documentation

Inspection Criteria

1.1. A documented fire safety program exists as required by applicable safety criteria. (*DOE O 420.1B, DOE STD-1066*)

1.2. A documented comprehensive self-assessment of the fire protection program is performed by the DOE site office and the facility contractor at least every 3 years, or at a frequency with appropriate justification approved by the DOE head of field element. (*DOE O 420.1B*)

1.3. Fire Hazard Analyses (FHA) have been prepared for each nuclear facility and the results coordinated and integrated into the Documented Safety Analysis as required. (*DOE O 420.1B, DOE STD-1066, DOE-HDBK-1163, NFPA 801*)

1.4. A baseline needs assessment (BNA) of the fire protection emergency response organization has been documented and updated every 3 years. The plan should describe in sufficient detail fire-fighting operations for the respective facilities. (*10 CFR 851, DOE O 420.1B, DOE STD-1066*)

1.5. Proper controls are incorporated to prioritize and monitor the status of the fire protection assessments and associated findings until final resolution.

Inspection Activities

- Verify that a current policy statement or equivalent directive has been issued that articulates management expectations regarding fire safety and emergency services.
- Verify exemptions from and equivalencies to applicable fire safety and emergency response criteria have been appropriately reviewed, approved, and documented by the appropriate AHJ.
- Review documentation of the previous fire protection program self-assessments.
- Review documentation of the previously performed baseline needs assessments.
- Review written emergency plans and procedures.
- Verify the contractor and site office leadership are reviewing the results of the fire protection assessments and tracking associated findings to final resolution.

Inspection Lines of Inquiry

- Do existing contracts reflect the essential elements of a complete fire safety program, commensurate with the nature and the scope of the work encompassed by the contracts?
- Are the elements of the fire protection engineering program found in a fire protection program manual (or equivalent documents)?
- Do baseline needs assessments specify minimum fire department staffing, apparatus, equipment and procedures, and are these requirements consistent with the Emergency Plan?
- Do emergency response procedures include pre-fire strategies and standard operating for both fire fighting and HAZMAT rescue operations?
- Do facility pre-plans accurately reflect fire department baseline needs assessment for staffing and equipment?
- Are fire safety and emergency services roles and responsibilities clearly delineated?
- Are the roles and responsibilities, command and control, and communications protocols for site emergency services and the fire department (or fire brigade) comprehensively defined, documented, and understood?
- Are off-site emergency response obligations defined in a documented and approved "mutual aid" agreement or equivalent document? Does this document or supporting documentation define roles and responsibilities, command and control systems, and communications protocols? Has there been documented training or exercises verifying functionality?
- Are collateral duty roles and responsibilities identified and justified? Has there been adequate training or exercise to assure capabilities?

- Is the mobile apparatus inventory sufficient and maintained for operability for anticipated site emergencies, with appropriate reserve capability?
- Have applicable regulations, DOE fire safety directives, and industry standards (such as applicable NFPA standards) been incorporated into the program?
- Are facility life safety walk-downs being completed and fire hazards being identified and corrected?
- Are fire impairments including compensatory actions, planned and unplanned impairments, emergency notifications, and restoration clearly identified and communicated?
- Are system or equipment outages for maintenance, testing, or special operations appropriately approved, communicated to impacted groups, compensatory measures implemented, and then restored to operations in a timely manner?
- Do notification and restoration requirements for responding to a fire alarm, supervisory, and trouble conditions meet NFPA 72, National Fire Alarm Code?
- Are facility abnormal and emergency alarm response procedures clear and consistent?
- Are means of control identified such as established limits of combustibles, maintenance of emergency light/exit signs, safe storage, and separation of compressed gases?
- Are program requirements identified for housekeeping practices, transient combustibles, liquids and solids, flammable/combustible liquids, compressed gases and means of egress consistent with recognized standards?
- Do facility inspections and/or checklists provide adequate guidance for identification of deficiencies and prioritizing of findings?
- Are facilities inspections or checklists appropriately reviewed for issues identification, tracking, and corrections?
- Have all procedure reviews been conducted and documented by a qualified fire protection engineer?

FP-2: Program Implementation - Fire and Related Safety Hazards and Self Assessments

Inspection Criteria

2.1. Fire and related safety hazards on site (or within the facility) have been identified and evaluated in conjunction with a current and comprehensive FHA and self-assessment. (*DOE O 420.1B*)

2.2. The FHA and self-assessments address all essential elements for a complete analysis as delineated in DOE 420.1 and its implementation guide. (*DOE O 420.1B*)

2.3. The information contained in the FHA and assessment is accurate, as required by applicable fire safety criteria. (*DOE O 420.1B*)

Inspection Activities

- Review Fire Hazard Analysis and Self-Assessment documentation.
- Perform a walkthrough of the facility.

Inspection Lines of Inquiry

- Do the FHA and referenced documents contain a complete and accurate description of the facility, including current process operations and related hazards?
- Do the FHA and assessments include a textual description of credible fire scenarios, including those involving radiological and chemical hazards?
- Are "hot work" and/or other non-standard operations or configurations analyzed in the FHA?

- Do the documents identify external fire exposures and evaluate the potential for fire and smoke spread from one fire area to another within the facility? Has the potential for external smoke or water damage to safety systems and equipment been evaluated?
- Are safe work practices followed by workers performing hot work and by assigned fire watches?
- Do site preparation and restoration of work areas meet hot work permit requirements?
- Do fire protection coordinators and fire protection engineers understand provisions of the hot work program?
- Does combustible loading comply with levels credited in the fire hazards analysis and the facility safety basis?
- Have administrative controls been implemented for managing transient combustibles?
- Are compressed gases and liquids safely stored?
- Are compressed gases and flammable liquids safely handled and dispensed?
- Do facility procedures comply with requirements for storage, handling, and dispensing of flammable liquids and compressed gases?
- Are flammable liquid storage cabinets (Underwriters Laboratories, Inc. /Factory Mutual) approved with approved means of venting and grounding? Are they appropriately placed within the facility?

FP-3: Program Implementation - Fire Prevention and Protection

Inspection Criteria

3.1. A complete spectrum of fire prevention controls and procedures are in existence and have been implemented as required by applicable fire safety criteria. (*DOE O 420.1B, Site & Facility DSA*).

3.2. All fixed fire protection features (appropriate construction types, fire barriers, fire alarm and signaling systems, manual and automatic fire suppression systems, etc.), that are required by authorization basis documents and fire hazards analyses, have been installed and are tested and maintained, as required by applicable fire safety criteria. (*DOE O 420.1B, Site & Facility DSA*).

3.3. A process exists to assure that all fire prevention and protection features are reviewed and approved by a qualified fire protection engineer. (*DOE O 420.1B*)

Inspection Activities

- Review the safety basis documentation for credited fire protection controls sets.
- Confirm the utilization of industry standards by a select review of construction plans and specifications, authorization bases documents, and self-assessment reports.
- Review inspection, testing, and maintenance documentation for credited control systems.
- Walk down the facility for selected fire safety systems.

Inspection Lines of Inquiry

- Is fire safety "defense-in-depth" applied across the site and encompasses all significant facilities and activities for which fires and related hazards represent a credible threat?
- Are fire and related hazards that are unique to DOE and are not addressed by industry standards protected by isolation, segregation, or special fire control systems (e.g., inert gas, explosion suppression)?
- Are passive fire safety features such as fire walls or "defensible areas" around facilities and utilities favored over active systems? Are engineering and design controls favored over administrative controls?

- Have required fire safety features been confirmed in comparison with authorization basis documents, FHAs, DOE directives, and NFPA standards? Confirmation of features should include those associated with emergency notification and egress.
- Are appropriate fire safety systems and features being maintained operable for facilities undergoing decontamination and decommissioning? If not, are compensatory measures being adequately implemented?
- Is an effective corrective maintenance program established to assure the timely repair of defective systems, support systems, and equipment, and the adequacy of the material condition of systems and equipment?
- Is post maintenance or repair testing effectively utilized to assure the adequacy of preventive or corrective maintenance and the operability of the system or equipment? Is the testing appropriately performed and documented to satisfy NFPA standards and QA requirements?
- Is a program of controls in place to monitor and effectively mitigate the impact of aging or obsolescence on fire protection systems, equipment, and components?
- Does the site have a program and procedures in place assuring the review and approval of construction project design packages by a qualified fire protection engineer?
- Do procedures assure modification or construction projects cannot precede without the (signature) approval of the cognizant fire protection engineer?
- Are the DOE field office and program office fire protection staffs involved with the approval of significant projects involving fire safety?
- Do fire protection system inspection, testing, and maintenance programs (scope and frequencies) conform to NFPA 25 and 72, as amended by DOE Implementation Guidance?

II. FHA/DSA Integration

FP-4: FHA/DSA Integration

Inspection Criteria

4.1 Within the scope of the review, the FHA conclusions shall be incorporated into the safety authorization (PSDR, PDSA, or DSA, as appropriate) and demonstrate the adequacy of controls provided by the system to eliminate, limit, or mitigate identified hazards, and define the process for maintaining the controls and controlling their use.

4.2 The safety authorization basis is consistent with the fire hazards analysis; demonstrates the adequacy of controls provided by the system to eliminate, limit, or mitigate identified hazards; and defines the processes for maintaining the controls current at all times and controlling their use.

Inspection Activity:
- Review the facility safety authorization basis and the respective Fire Hazards Analysis.

Inspection Lines of Inquiry

- Does the safety basis identify all facility hazardous radiological, biological, and chemical hazards and are they consistent with the FHA?
- Do safety basis accident analyses clearly identify and describe the fire protection system's credited functional requirements and are they consistent with the FHA?

- If the consequence results in defining Safety Class controls for the unmitigated dose, is the fire analysis formalized and quantitative?
- Have the performance requirements of safety basis credited SSCs been identified as preventive and/or mitigation controls and are the performance requirements supported by analysis or other documentation?
- Does the facility fire protection engineer have an adequate level of knowledge of the safety-related system's performance requirements and are they involved with the development of, or changes to, the safety basis (PSDR, PDSA, or DSA)?
- Does the FHA/DSA specify adequate mitigation strategies including isolation, segregation, or special fire control systems?
- Does the FHA/DSA analyze the spread paths and impacts (radiological, toxic, or biological) where smoke or contamination spread may be a special concern for the safety of the workers?
- Are control sets (e.g. ventilation, containment, or drainage systems) necessary for mitigating contaminant spread or release identified and credited appropriate to their safety level (safety class, safety significant or defense in depth) and functionality requirements?
- Have all credible fire-related failure modes been considered within the FHA/DSA for safety equipment including the potential for spurious signals and fire-induced electrical faults which may cause equipment to operate in an unintended manner or trip upstream electrical equipment respectively?
- Are procedures required to implement the FHA/DSA controls adequately written, reviewed, approved, controlled, and maintained?

III. Engineered Design Features

The Fire Protection inspection will address engineered design features, testing, and configuration management and evaluate the effectiveness and compliance of the fire protection design SSCs to requirements established in the facility safety basis and fire hazards analysis, as well as recognized standards and good engineering fundamentals and practice. This assessment will evaluate the effectiveness in maintaining the functionality and performance of these safety systems and will include the review of key documents including but not limited to the appropriate safety basis documents, fire hazards analysis, system design description, and supporting documents (e.g., system diagrams, P&IDs, calculations).

Conflicts between DOE Orders, NFPA Codes and Standards, and the applicable state and local building codes must be resolved by considering the safety basis requirements followed by the applicable NFPA requirements and then the applicable building code requirements under consultation with designated fire protection subject matter experts (SMEs).

FP-5: Engineered Design Features

Inspection Criteria

5.1 Within the scope of the review, the safety authorization basis consistent with the fire hazards analysis demonstrates the adequacy of controls provided by the fire protection systems to eliminate, limit, or mitigate identified hazards, and defines the process for maintaining the controls current at all times and controlling their use.

5.2 Technical, functional, and performance requirements for the systems are specified in (or referenced in) the facility authorization basis documents consistent with the facility fire

hazards analysis. Safety/authorization basis documents identify and describe the system safety functions, and these criteria are translated into design calculations and procedures.

5.3 Items and processes are designed using sound engineering/scientific principles and appropriate standards.

5.4 Items are designed, installed, tested, and maintained to assure they can satisfy the required safety functions under appropriately analyzed and plausible accident or incident conditions.

Inspection Activity:

- Review the appropriate safety basis documents, fire hazards analysis, system design description, and supporting documents (e.g., system diagrams, P&IDs, calculations).
- Verify through document reviews and field walk-downs that redundant fire protection systems are provided where required by DOE Order 420.1B, safety basis analysis, significant life safety hazards, or unacceptable program interruptions?
- Perform facility inspections and document reviews to assure that a means has been provided to prevent the accidental release of significant quantities of contaminated products of combustion and firefighting water to the environment such as ventilation control, filter system, curbs and dikes.
- Verify, by walk-down or other means, that system installed configuration will support system function under accident/event conditions.
- Verify that an unobstructed fire water supply flow-path is always available.

Inspection Lines of Inquiry

- Do authorization basis accident analyses clearly identify and describe the fire protection system credited functional requirements?
- Are the performance requirements of safety basis credited SSCs identified as preventive and/or mitigation controls in the accident analysis and are those performance requirements translated to design requirements supported by analysis or other documentation?
- Have the design bases and design assumptions identified in the safety analysis been appropriately translated into design calculations and procedures?
- Do SSC performance requirements incorporate design margin required by DOE Orders and Standards, NFPA Standards, and industry recognized codes.
- Are fire protection features have been appropriately classified as “safety class,” “safety significant,” "essential," "important to safety," or "defense in depth?"
- Are fire protection systems designed, installed, and maintained such that their inadvertent operation, inactivation, or failure of structural stability will not result in the loss of vital safety functions, inoperability of safety class systems, or personal injury?
- Are the facility’s fire rated construction and barriers as designed, installed, and maintained commensurate with requirements established in the safety basis, fire hazards analysis, and applicable fire codes and standards such as NFPA 221.
- Are redundant fire protection systems provided when required?
- Are operation and system alignments consistent with design basis assumptions?
- Are all energy sources (e.g., electric power, diesel fuel, etc.) relied on for accident mitigation, including those used for control functions designed, installed, and maintained to be available and adequate during accident/event conditions?
- Is monitoring performed to assure that potential degradation is prevented?
- Is equipment qualification suitable for the environment expected under all conditions?
- Are fire protection SSCs adequately protected from natural phenomena external events?
- Has the completed design been recorded in design output documents, such as drawings, specifications, test/inspection plans, maintenance requirements, and reports?

- When fire alarm conditions occur, is there an automatic means of notification of facility occupants and emergency responders in accordance with NFPA 72, National Fire Alarm Code?
- Is adequate emergency egress is provided for all occupants in accordance with the Life Safety Code NFPA 101?
- Are access routes to emergency egress paths unobstructed and are designated exits not blocked?
- Are life safety requirements for the specific occupancies met for travel distance, dead ends, and common path of travel?
- Are controls established in fire department pre-plans to reduce the potential for release due to firefighting operations?

IV. TSR Surveillance and Testing

FP-6: Testing

Inspection Criteria:

6.1 Surveillance and testing of the system demonstrates that the system is capable of accomplishing its safety functions and continues to meet applicable system requirements and performance criteria.

6.2 Surveillance and test procedures confirm that key operating parameters for the overall system and its major components remain within safety basis, NFPA, and applicable consensus standards operating limits.

6.3 The acceptance criteria from the surveillance tests used to confirm system operability are consistent with the safety basis.

6.4 Instrumentation and test equipment for the system are calibrated and maintained.

Inspection Activity: Review surveillance and NFPA required testing procedures, and the supporting DSA TSRs and bases for the system and major components and a sample of the test results, including a walk-through of the surveillance test procedure with appropriate facility personnel (e.g., test technicians, engineers, operations personnel).

Inspection Lines of Inquiry:

- Can parameters that demonstrate compliance with the safety basis and NFPA 25 be measured or physically verified?
- Is a surveillance test performed to demonstrate all SSCs safety-related performance requirements?
- Is safety basis TSR surveillance testing performed separately from testing required by NFPA 25 so as to assure the SSC being tested is not preconditioned?
- Do results of testing demonstrate that adequate safety margins are maintained?
- Does the system design include provisions necessary for conducting the tests?
- Are appropriate data recording provisions included or referenced and used to record results?
- Does the procedure include provisions for listing discrepancies?
- Does the procedure require timely notification to facility management about any failure or discrepancy that could impact operability?
- Did appropriate personnel review the test results and take appropriate action?
- Is there a clear linkage between the test acceptance criteria and the safety documentation, and are the acceptance criteria capable of confirming that safety/operability requirements are satisfied?
- Was the test equipment used for the surveillance calibrated?

V. Configuration Management

FP-7: Configuration Management

Inspection Criteria:

7.1 Configuration management process adequately integrates the elements of system requirements and performance criteria, system assessments, change control, work control, and documentation control, as required by DOE Order 420.1B.

7.2 Configuration management is used to develop and maintain consistency among system requirements and performance criteria, documentation, and physical configuration for the systems, structures and components (SSCs) within the scope of the program.

7.3 System design basis documentation and supporting documents are kept current using formal change control and work control processes.

7.4 Changes to system requirements, documents, and installed components are formally designed, reviewed, approved, implemented, tested, and documented.

7.5 An unreviewed safety question (USQ) process has been established in accordance with Code of Federal Regulations (CFR) 830 and is being appropriately implemented to control changes to safety systems including documents governing work on the systems.

Inspection Activity:

- Selectively walk-down system equipment and components and compare the actual physical installation of the system to documentation of the system design and safety basis; review safety component and services procurement programs (including the quality assurance program), and sample procurement packages.
- Interview selected CSE, SSOs, procurement, and QA personnel to assure conformance of the configurations to the design safety basis.

Inspection Lines of Inquiry:

- Have as-built drawings and shop drawings been maintained after production to show actual configuration?
- Are materials and installation of system components consistent with the requirements and performance criteria for the system, including quality controls and quality assurance and as appropriate software quality assurance?
- Did the Cognizant Systems Engineer prepare/approve a formal equivalency determination for commercial procurement of a safety component?
- Does the site quality assurance program include controls to prevent the introduction of suspect or counterfeit items into essential safety systems?
- Are system components properly labeled to assure proper configuration and operation?

Inspection Activity:

- Review documentation related to selected design modifications, configuration changes, and interview individuals responsible for processing selected changes made to the system requirements, installed equipment, and associated documents.

Inspection Lines of Inquiry:

- Are documents affected by the changes appropriately identified?
- Are changes accurately described and reviewed and approved, as appropriate?
- Are systems, structures, and components affected by the changes identified by facility management, users, operators or others affected by the changes?
- Do facility procedures ensure that changes to the system requirements, documents, and installed components adequately integrated and coordinated with those organizations affected by the change?
- Are changes to the system reviewed to ensure that system requirements and performance criteria are not affected in a manner that adversely impacts the ability of the system to perform its intended safety function?
- Are installation instructions and post-modification testing instructions and acceptance criteria appropriately specified?
- Are safety basis and design documents affected by the change revised and kept current using formal change control and work control processes?
- Are new design calculations, tests, or procedures required to support the change?
- Is there adequate evidence that the CSE has reviewed and concurred with design changes and the associated system modification work package?
- Are engineering (including the design authority and technical disciplines), operations, and maintenance organizations made aware of system changes that affect them and appropriately involved in the change process?
- Are other organizations affected by the change such as training, document control, hazard analysis/safety basis, fire protection, etc., integrated into the change process?

Inspection Activities:

- Review the USQ process procedure(s) and the results of USQ evaluations.

Inspection Lines of Inquiry:

- Has the contractor defined the USQ process in a procedure and has DOE line management approved the procedure?
- Does the process conform to the requirements of 10 CFR 830.203 and is it consistent with DOE guidance?
- Have design changes been appropriately evaluated using the USQ process?
- Has a USQ determination been made on potential inadequacies of the documented safety analysis which were identified?

References:

- 10 CFR 830, Nuclear Safety Management
- 10 CFR 851, Worker Safety and Health Program
- DOE Order 420.1B, *Facility Safety*
- DOE Order 440.1B, *Worker Protection Program*
- Nuclear Facility FHA, DSA and TSR
- 29 CFR 1910, Subpart E, Means of Egress
- 29 CFR 1910, Subpart L, Fire Protection
- 29 CFR 1926, Safety and Health Regulations for Construction
- DOE Guide 420.1-3, Implementation Guide for DOE Fire Protection
- DOE Standard 1066, Fire Protection Design Criteria
- DOE Standard 1088, Fire Protection for Relocatable Structures
- Applicable National Fire Protection Association Codes and Standards

- DOE-STD-3009-94, Preparation Guide for U.S. DOE Nonreactor Nuclear Facility Documented Safety Analyses; Operational Safety
- Applicable NFPA Recommended Practices and Guides
- National Fire Protection Association Handbook
- Society of Fire Protection Engineers Handbook