



DOCUMENT NO.: DND-FP-PDD-00001	REV. NO. 0	EFFECTIVE DATE: <u>10/1/2025</u>
TITLE: Fire Protection Program Description	<u>5 YR PERIODIC REVIEW DATE: 9/17/2030</u>	
	APPROVED BY:	Lynn Wilbur
	DATE:	9/17/2025
		(Signature on File)

USE CATEGORY:	INFORMATION USE	Page 1 of 25
SME: Lynn Wilber	Writer: Adam Kritzwiser	

Level 2 Program Description Document (PDD)

Revision	Record of Issue/Revision	Affected Pages
0	Initial Release under Southern Ohio Cleanup Company LLC (SOCCo)/Periodic Review.	All

Previous Record of Issue/Revision information is available from the history files.

This Document Requires DOE Approval

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 2 of 25

CONTENTS

1.0	PURPOSE	3
2.0	SCOPE AND APPLICABILITY	3
3.0	PROGRAM DOCUMENTS	4
3.1	Requirements and Guidance	4
4.0	PROGRAM RESPONSIBILITIES	4
4.1	General Requirements	4
4.2	Fire Protection Program	5
4.3	Fire Protection Design	7
5.0	PROGRAM DESCRIPTION	8
5.1	Organizational Elements	8
5.2	Fire Prevention	11
5.3	Facility Fire Safety	11
5.4	Facility Modifications and Construction	12
5.5	Fire Protection for Abandoned Facilities and Facilities Undergoing D&D-Transitional Facilities	14
5.6	Fixed Fire Protection Systems	16
5.7	Portable Fire Protection Systems	17
5.8	Flammable/Combustible Materials	17
5.9	MCSA Fire Investigation Support	18
5.10	Annual Fire Protection Summary Report	18
6.0	DEFINITIONS/ACRONYMS	18
6.1	Definitions	18
6.2	Acronyms	20
Appendix A	REGULATORY REQUIREMENTS FLOW DOWN	22
Appendix B	CROSS-REFERENCE DOE O 420.1C, FACILITY SAFETY TO FBP PORTSMOUTH FIRE PROTECTION PROGRAM	23

TITLE: <p style="text-align: center;">Fire Protection Program Description</p>	DND-FP-PDD-00001
	REV. NO. 0
	Page 3 of 25

1.0 PURPOSE

- 1.1 When properly implemented, the protocols and methods described in this Program Description Document (PDD) in conjunction with the requirements set forth in the Site Wide Fire Protection Program (FPP), maintained by Mission Conversion Services Alliance (MCSA) Contractor, meet the intent of DND-PM-PDD-00001, *Integrated Safety Management System*, requirements for lessons learned, feedback and improvement Integrated Safety Management System (ISMS) Core Function 5, facility safety; and fully meets the ISMS requirements for Fire Protection (FP) activities at the Southern Ohio Cleanup Company LLC (SOCCo) facilities.
- 1.2 This document implements applicable regulatory requirements. They are listed in Appendix A, *Regulatory Requirements Flow Down*.

2.0 SCOPE AND APPLICABILITY

- 2.1 This Level 2 PDD in conjunction with MCSA site-wide FPP establishes the requirements for a comprehensive FPP for United States Department of Energy (DOE) sites, facilities, and emergency response organizations at the Portsmouth Gaseous Diffusion Plant (PORTS). This program applies to all SOCCo employees, Contracted Labor Resources (CLRs), and all facilities, in whole or in part, for which SOCCo has responsibility.
- 2.2 This PDD is not applicable to facilities, in whole or in part, for which DOE has retained responsibility or assigned responsibility through agreements with lessees, tenants, or Other Site Contractors (OSCs).
- 2.3 This PDD identifies the elements and program description of activities that will remain under SOCCo control which adhere to the provisions and requirements the site FPP. The purpose of the program is to minimize the potential for, but is not limited to:
 - Occurrence of a fire or related event
 - Fires that cause an unacceptable onsite or offsite release of hazardous or radiological material that could impact the health and safety of employees, the public, or the environment
 - Unacceptable interruption of vital DOE programs as a result of fire and related hazards
 - Property loss from fire exceeding limits established by DOE
 - Fire damage to critical process controls and safety-related Structure, System and Components (as documented by appropriate safety analysis)
- 2.4 This PDD defines the administrative program responsibilities for ensuring SOCCo maintains compliance with site wide and project related FP requirements when managing or overseeing subcontractors.

TITLE: <p style="text-align: center;">Fire Protection Program Description</p>	DND-FP-PDD-00001
	REV. NO. 0
	Page 4 of 25

2.5 Henceforth, reference to the term “Fire Hazards Analysis (FHA)” will also encompass, when applicable, Transitional Fire Hazards Analysis (TFHA) and TFHA Addendums. All FHAs, TFHAs, Pre-Fire Plans, etc. will be developed by MCSA FP Services under Inter-Agreement as defined by FSA-PORTS-0025.

3.0 PROGRAM DOCUMENTS

3.1 Requirements and Guidance

3.1.1 10 CFR 851, *Worker Safety and Health Program*

3.1.2 DOE Order 420.1C, *Facility Safety* (latest revision)

3.1.3 DOE STD-1066-2023, *Fire Protection*

3.1.4 International Building Code or applicable State of Ohio codes

3.1.5 National Fire Protection Association (NFPA) Codes and Standards

4.0 PROGRAM RESPONSIBILITIES

4.1 General Requirements

For the SOCCo managed facilities, sites, activities, design, and construction, the SOCCo FP PDD in conjunction with the Site wide FPP, maintained by MCSA , ensures that the following are performed:

- Provides a level of safety sufficient to fulfill requirements for highly protected risk (HPR)
- Provides methods to prevent loss of safety functions and safety systems as determined by safety analysis and provides defense-in-depth
- Meets or exceeds applicable building codes for the region and NFPA codes and standards as follows:
 - Facilities or modifications thereto must be constructed to meet codes and standards in effect, when design criteria are approved, otherwise known as the Code of Record (COR).
 - Provisions of subsequent editions of codes or standards (promulgated after the COR) must be met to the extent that they are explicitly stated to be applicable to existing facilities. Other provisions of updated codes and standards must be applied to existing facilities when a construction modification takes place or when a potential for immediate risk to life, safety or health has been identified through either the facility assessment or FHA review process, or during the construction review or permitting process.
 - 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.

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 5 of 25

- Conflicts between NFPA requirements and the applicable building code requirements are resolved by the DOE Head of Field Element, consistent with DOE-STD-1066-2023, and in consultation with designed building code, MCSA Contractor Authority Having Jurisdiction (CAHJ) and the SOCCo fire protection Subject Matter Experts (SMEs).

4.2 Fire Protection Program

- 4.2.1** The SOCCo FP program in conjunction with the site wide MCSA FPP affirms SOCCo's commitment to fire protection and fire suppression capabilities sufficient to minimize losses from fire and related hazards consistent with HPR status in private industry.
- 4.2.2** This FP PDD in conjunction with the site-wide MCSA FPP provides an acceptable level of safety from fire and fire related hazards. This is accomplished with the use of facility and MCSA fire protection, fire alarm notification with appropriate egress capabilities, and access to an appropriately trained and equipped MCSA fire department. The primary drivers for the program are the applicable NFPA Codes and Standards.
- 4.2.3** The SOCCo FP PDD criteria and associated procedures include, but are not limited to:
- Any facility-specific requirements
 - Administrative responsibilities of the SOCCo FP Liaison
 - Process for requesting MCSA FP Services support for design, installation requirements, FP related operability evaluations, inspections, maintenance, and testing requirements
 - Use and storage of combustible, flammable, radioactive, and hazardous materials to minimize risk from fire
 - Notification of Fire Protection System (FPS) impairments
 - Smoking and hot work (under MCSA Hot Work Program)
 - Safe operation of process equipment
 - Prevention measures that decrease fire risk
- 4.2.4** SOCCo's FPP is an integrated system utilizing both the MCSA site-wide FPP and SOCCo's FP PDD to ensure that FP requirements are documented and incorporated in plans and specifications for new facilities and significant modifications to existing facilities.
- 4.2.5** The SOCCo FP PDD requires documented review of plans, specifications, procedures, and acceptance tests by an MCSA qualified fire protection engineer with collaboration with SOCCo Engineering.

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 6 of 25

- 4.2.6** SOCCo FP Liaison will request FP related document development from MCSA FP Services Group under an Interagency Agreement (IA). FHAs and TFHAs will be developed by MCSA FP Engineers using a graded approach and are conducted for hazard category 1, 2, and 3 nuclear facilities, significant new facilities, and facilities that represent unique fire safety risks.
- 4.2.7** FHA conclusions are incorporated into the Documented Safety Analysis (DSA) and integrated into design basis and beyond design basis accident conditions.
- 4.2.8** SOCCo maintains access to a qualified, trained fire protection staff that includes DOE Qualified Fire Protection Engineers (DQFPE), FP CAHJ, technicians, and firefighting personnel to implement the requirements of this program utilizing an IA with MCSA.
- 4.2.9** MCSA maintains a baseline needs assessment (BNA) with, contractually required, concurrence by SOCCo and PORTS OSCs for the fire protection emergency response organization. The BNA defines the minimum requirements needed to meet the Safety Basis needs of the site, which:
- Establishes the PORTS site firefighting capabilities to provide:
 - Effective response to suppress all fires
 - Emergency medical and hazardous materials response capabilities
 - Staffing, apparatus, facilities, equipment, training, preplans, offsite assistance, and procedures
 - Reflects applicable NFPA codes and standards.
 - The BNA is updated at least every 3 years and in accordance with applicable NFPA code provisions, or whenever a significant new hazard is introduced.
- 4.2.10** SOCCo will ensure that MCSA developed site emergency plans, and FHAs, and the SOCCo developed DSAs incorporate BNA information.
- 4.2.11** MCSA, with SOCCo support, maintains pre-fire strategies, plans, and standard operating procedures to enhance the effectiveness of site firefighting personnel.
- 4.2.12** Where no alternative exists to criticality safety restrictions on the use of water for fire suppression, the need for such restrictions is fully documented with written technical justification.
- 4.2.13** For SOCCo managed facilities and activities, SOCCo maintains a process to identify, prioritize, and monitor the status of any fire protection assessment findings, recommendations, and corrective actions until final resolution (DND-QP-PRO-00020 *Problem Reporting and Issues Management*).

TITLE:	Fire Protection Program Description	DND-FP-PDD-00001
		REV. NO. 0
		Page 7 of 25

4.2.14 MCSA will maintain a process for SOCCo to request review and documented recommendation for approval of fire safety equivalencies to any FP code or Standard's requirements to the DOE AHJ for fire safety.

4.2.15 SOCCo will adhere to the site wide *PORTS Wildland Fire Protection Plan* which will be maintained by MCSA.

4.3 Fire Protection Design

4.3.1 SOCCo maintains access to a comprehensive fire protection design program for facilities and supporting systems through an Independent Assessment (IA) with MCSA.

4.3.2 MCSA will maintain a reliable and adequate supply of water for site wide fire suppression activities.

4.3.3 SOCCo requires non-combustible construction materials for facilities exceeding the size limits established by DOE (See DOE STD-1066-2023, *Fire Protection*, for information on size limitations).

4.3.4 SOCCo requires the use of fire-rated construction materials and barriers; commensurate with applicable codes and fire hazards, to isolate hazardous areas and minimize fire spread and loss potential.

4.3.5 SOCCo design requirements include automatic fire extinguishing systems throughout all significant facilities and in all facilities and areas with potential for loss of safety class systems (other than FPS's); significant life safety hazards; unacceptable program interruption, or fire loss potential in excess of limits defined by DOE.

4.3.6 SOCCo requires redundant FPSs in areas where:

- Safety class systems are vulnerable to fire damage, and no redundant safety capability exists outside of the fire area of interest.

OR

- The maximum possible fire loss (MPFL) exceeds limits established by DOE.

4.3.7 SOCCo requires in new facilities, redundant safety class systems (other than FPS's) located in separate fire areas.

4.3.8 SOCCo ensures access to a means to notify emergency responders and building occupants of a fire (e.g., fire alarms, signaling systems, plant radios, and phones) through an IA with MCSA and/or ISS Contractor.

4.3.9 SOCCo requires emergency egress and illumination for safe facility evacuation in the event of fire as required by applicable codes or FHA/TFHA.

TITLE: <p style="text-align: center;">Fire Protection Program Description</p>	DND-FP-PDD-00001
	REV. NO. 0
	Page 8 of 25

- 4.3.10** SOCCo maintains physical access and appropriate equipment that is accessible for effective fire department intervention (e.g., interior standpipe systems in multi-story or large, complex facilities).
- 4.3.11** SOCCo provides a means to prevent the accidental release of significant quantities of contaminated products of combustion and firefighting water to the environment, such as ventilation control and filter systems and curbs and dikes. Such features would only be necessary if required by the FHA, TFHA or DSA in conjunction with other facility or site environmental protection measures.
- 4.3.12** MCSA Fire Services provides SOCCo with a means to address fire and related hazards that are unique to DOE and not addressed by industry codes and standards. Mitigation features may consist of isolation, segregation or the use of special fire control systems (water mist, clean agent, or other special suppression systems) as determined by the FHA/TFHA.
- 4.3.13** FPSs are designed such that their inadvertent operation, inactivation, or failure of structural stability will not result in the loss of vital safety functions or affect the inoperability of safety class systems as determined by the DSA.

5.0 PROGRAM DESCRIPTION

5.1 Organizational Elements

Directors

- 5.1.1** Ensure project compliance with all applicable FP requirements contained in 10 CFR 851, *Worker Safety and Health Program*, and DOE Order 420.1C, *Facility Safety*.
- 5.1.2** Ensure the Functional Area Managers (FAM)/project managers, Training Manager, and Facility Managers identify and develop procedures/instructions and training needed for personnel to carry out FP responsibilities.
- 5.1.3** Ensure compliance with this FP PDD by implementing project specific procedures to ensure compliance with facility FP and safety basis documents.

FP Liaison

- 5.1.4** Act as the principle liaison with MCSA Fire Services to:
 - Coordinate new work activities.
 - Initiate FP system impairments for projects.
 - Track SOCCo managed fire equipment system deficiencies for SOCCo managed facilities by entering Problem Reports (PRs) into the Integrated Tracking System (ITS) database and keep the Facility Manager apprised of the PR status.

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 9 of 25

- 5.1.5** Ensure the SOCCo FP PDD, in conjunction with the adherence to MCSA site wide FPP, meets the mandated FP criteria, as defined in the SOCCo Prime Contract requirements and applicable DOE Orders and Standards.
- 5.1.6** Initiate the development of FP technical reports, assessments, and FHAs to support SOCCo projects, as needed, in accordance with the criteria established in DOE Order 420.1C, *Facility Safety* and specific requirements including, per applicable MCSA FPP documents through the IA with MCSA.
- 5.1.7** At the direction of the MCSA FP CAHJ, initiate and coordinate SOCCo's support of fire investigations that will be performed by MCSA Fire Services Group.
- 5.1.8** Coordinate and track activities with MCSA Fire Services to ensure that:
- Routine FP activities performed by MCSA Fire Services Group (e.g., inspection of fixed FP systems and portable fire extinguishers) are performed in a timely manner.
 - Fixed fire suppression system outages are corrected/repared in a timely manner.
 - During such outages, ensure adequate compensatory measures that meet DOE and NFPA requirements, as well as any requirements from guidance documents/authorities (i.e., FHAs, Safety Basis, and MCSA CAHJ determinations) are implemented.
- 5.1.9** Ensure FHAs are prepared for all SOCCo managed nuclear facilities, significant new facilities, and facilities that represent unique or significant fire safety risks in accordance with DOE Order 420.1C, *Facility Safety*, as necessary, for new projects that warrant a technical appraisal for fire hazards associated with the proposed work are prepared per the applicable MCSA FP procedures.
- 5.1.10** Ensure all SOCCo personnel and sub-contractors understand and adhere to fire safety rules and regulations as prescribed by applicable procedures, hazard assessments and work control documents.

Nuclear Safety Manager

- 5.1.11** Ensure FHA and mitigation actions are appropriately integrated into SOCCo Safety Basis Documents (i.e., DSA, Technical Safety Requirements (TSR), BIOS and implementing procedures in compliance with the requirements of 10 CFR 830, *Nuclear Safety Management*, Subpart B, *Safety Basis Requirements*.)
- 5.1.12** Ensure FHA conclusions are incorporated into the SOCCo Safety Basis and integrated into evaluation of design basis and beyond design basis accident conditions as required by DOE Order 420.1C.

TITLE:		DND-FP-PDD-00001
	Fire Protection Program Description	REV. NO. 0
		Page 10 of 25

Decontamination and Decommissioning (D&D)/Site Maintenance and Engineering (SM&E) and Work Control

- 5.1.13 Ensure appropriate FP requirements are included in work control packages.
- 5.1.14 Ensure all personnel working in their area of responsibility comply with MCSA site wide FPP requirements and this PDD.
- 5.1.15 Coordinate all FP system outage information with MCSA Fire Protection Technical Specialist (FPTS). When fire system outages occur, determine limitations/restrictions on work activities until the systems are restored to normal operation.
- 5.1.16 Review and concur with all FP Technical Assessments and analysis reports developed by MCSA FP Services as related to their area of responsibility.

Contracts Manager

- 5.1.17 Ensure appropriate FP requirements are flowed down to sub-tier contractors under the cognizance of SOCCo Management.

Employees and Contracted Labor Resources

- 5.1.18 Responsible for fire safety in the workplace.
- 5.1.19 Plan and conduct all work in a manner that minimizes hazards from fire and other related events.
- 5.1.20 Comply with FP requirements established in SOCCo performance documents.
- 5.1.21 **WHEN** necessary, **THEN** provide FP safety feedback on work processes to improve requirements and performance documents.
- 5.1.22 Recognize and respond to local fire evacuation alarms and report all fire emergencies.
- 5.1.23 Understand the need for and implementation of good housekeeping practices including not obstructing exits, using emergency fire equipment, and minimizing transient combustibles.

Training Organization

- 5.1.24 Coordinate with the MCSA training organization to ensure necessary FP training programs are developed and provided per the MCSA IA to support SOCCo project personnel.

TITLE: <p style="text-align: center;">Fire Protection Program Description</p>	DND-FP-PDD-00001
	REV. NO. 0
	Page 11 of 25

5.2 Fire Prevention

All Managers

- 5.2.1** Ensure personnel assigned to their cognizant work group are adequately trained in fire safety and prevention measures.
- 5.2.2** Provide feedback through the FP Liaison to the MCSA FPE and MCSA Training Manager on adequacy of procedures or suggested changes.
- 5.2.3** Ensure fire prevention and safety topics are included in safety meetings, toolbox briefings, etc.

Facility Managers

- 5.2.4** Ensure activities involving hot work (i.e., welding and cutting or open burning) are conducted in accordance with MCSA Hot Work Program requirements and MCSA Permit issuance responsibilities covered under the IA with MCSA Contractor.
- 5.2.5** With the technical support of the FPE, ensure the use and storage of combustibles and flammable materials are in accordance with DND-FP-PRO-00005, *Combustible Control Program*.
- 5.2.6** Review Fire Services inspection reports of facilities; take appropriate action to correct deficiencies and report corrective actions to the SOCCO FP Liaison and MCSA FPE.
- 5.2.7** Ensure materials susceptible to spontaneous ignition, such as oily rags, paint thinner soiled rags, etc., are stored in an Underwriters Laboratory (UL) listed container that has been approved by the MCSA FP Group.
- 5.2.8** Ensure all small appliances have been approved by MCSA FP and/or the FP Liaison prior to purchasing and prior to use.
- 5.2.9** Initiate the performance of periodic inspections by MCSA Fire Services to ensure combustibles are being controlled as described in the applicable procedure.
- 5.2.10** **IF** applicable, **THEN** initiate Problem Report per DND-QP-PRO-00020, *Problem Reporting and Issues Management*.

5.3 Facility Fire Safety

Facility Managers

Ensure building life safety features are maintained in an operable condition at all times including:

- Exit passageways are clear of obstruction.

TITLE: <p style="text-align: center;">Fire Protection Program Description</p>	DND-FP-PDD-00001
	REV. NO. 0
	Page 12 of 25

- Fire/Egress doors and associated hardware are functional.
- Fire barriers are maintained.
- FP systems are functional.
- Emergency Lighting is tested and remains operational, where required.

5.4 Facility Modifications and Construction

NOTE

FP requirements for the construction of new facilities and significant facility modifications must be in accordance with the applicable NFPA codes and standards and those requirements promulgated by DOE STD 1066-2023, *Fire Protection*, and DOE Order 420.1C, *Facility Safety*. Significant facility modifications are those that typically impact changes to occupancy type or involve major renovation to an existing structure.

SOCCo FP Liaison

- 5.4.1** When requested by Management, contact the MCSA CAHJ to determine if a TFHA or an addendum to an existing TFHA is warranted for any Category III facilities or higher or those facilities which are vital to the DOE mission.

SOCCO FP Liaison

- 5.4.2** Ensure MCSA site wide FPP requirements and the requirements of this PDD are documented and incorporated into plans and specifications for design of new facilities and modifications to existing facilities by MCSA Fire Service, and FPEs.
- 5.4.3** Contact MCSA FP Services to request a qualified MCSA FPE to execute the specific requirements for the project.

Facility Manager

- 5.4.4** Coordinate with the MCSA FPE to obtain approval whenever the nature of a building occupancy changes (e.g., from storage to industrial or from laboratory to office) or building configuration or facility modifications are proposed.

TITLE:	Fire Protection Program Description	DND-FP-PDD-00001
		REV. NO. 0
		Page 13 of 25

Design Engineer Manager

- 5.4.5** Ensure Lead Engineers obtain FP design or program guidance from the MCSA FPEs and establish minimum FP criteria for D&D projects.
- TFHA may be required and Code of Record (COR performed using the graded approach in accordance with applicable MCSA FHA procedure to satisfy the requirements of DOE O 420.1C, *Facility Safety* and NFPA 241, *Standard for Safeguarding Construction, Alteration and Demolition Operations*.
 - Ensure Lead Engineers obtain FP design or program guidance from the MCSA FPEs and establish minimum FP design criteria for the project. The MCSA FPEs will determine the need for an FHA that is required for new or existing facilities to satisfy the requirements of DOE O 420.1C, *Facility Safety*, and NFPA 801, *Standard for Fire Protection for Facilities Handling Radioactive Materials*.
 - Ensure the FHA will be developed using a graded approach in accordance with the applicable MCSA FHA procedure.
- 5.4.6** Incorporate in design documents those FP features deemed essential by MCSA FPE and consistent with applicable codes and standards.
- 5.4.7** Ensure design review/approval from MCSA FPE is performed on new construction and significant modifications developed by SOCCo.
- 5.4.8** Obtain concurrence with MCSA Fire Service group that any new proposed construction or facility modifications will not exceed the fire department's ability to respond and suppress a fire or the PORTS BNA.
- 5.4.9** Ensure installation of all electrical equipment is in accordance with the requirements of NFPA 70, *National Electrical Code*®, Occupational Safety and Health Administration (OSHA), and as shown on the applicable design drawings and specifications for both permanent plant installations and temporary construction installations.
- 5.4.10** Ensure that fixed FP system information related to new construction or modifications is forwarded to MCSA Fire Services for inclusion in the inspection and testing schedule.
- 5.4.11** Support the MCSA CAHJ in the development of equivalencies and exemptions as needed.

All Employees and Sub-Contractors

- 5.4.12** Comply with SOCCo smoking policy by prohibiting smoking inside buildings, radioactive material areas, radiological areas, or in areas where toxic or flammable materials are stored or used.

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 14 of 25

5.4.13 Comply with MCSA Hot Work Program requirements for all work activities involving burning, welding, grinding or other hot work operations.

5.5 Fire Protection for Abandoned Facilities and Facilities Undergoing D&D-Transitional Facilities

SOCCo FP Liaison

5.5.1 Ensure that SOCCo adheres to 10 CFR 851, *Worker Safety and Health Program*, and DOE Order 420.1C, *Facility Safety*, and other provisions contained in the SOCCo Prime Contract establish FP requirements for transitional DOE facilities. Decisions relating to the fire safety transitional facilities should be made on the basis of the following considerations:

- The need for FP in these facilities is governed by the fire risks to the public, workers, fire fighters, and potential release of hazardous and radiological materials to the environment.
- It is essential that access to the work site be maintained for emergency vehicles. Adequate accessibility is needed for large fire vehicles with a broad turning radius. Full access to fire hydrants must be maintained.
- The evaluation of fire risks in relation to the need for fire safety features can be accomplished through a “transitional” FHA or other technical assessment of the hazards.
- Fire safety features that have been required by DOE may be rendered inoperative or considered no longer needed if justified by the TFHA or other analysis documents and approved by the MCSA CAHJ. Such features can be abandoned in place until they are dismantled as part of D&D activities.
- Facilities undergoing D&D will reach a point where it is no longer practical to maintain fire safety features due to actual building demolition. At this point, such features can be abandoned in place or dismantled as part of D&D operations upon approval of the MCSA CAHJ and concurrence with the DOE AHJ, as necessary.
- All retained interior FP systems should be maintained operational to the extent possible while interior D&D activities are taking place. Temporary deactivation of FP features shall be treated as a FP system impairment, with appropriate compensatory measures implemented until such time as the feature(s) is returned to full operational mode.

SOCCo FP Liaison

5.5.2 Coordinate with MCSA CAHJ to determine the level of FP requirements for each specific D&D project to include:

- Need for a TFHA or written addendum to an existing TFHA.

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 15 of 25

5.5.3 Ensure a qualified MCSA FPE is assigned to support the specific requirements for the project.

- The MCSA FPE shall write a technical brief on proposed D&D activities and should obtain SOCCo concurrence prior to performing work. DOE AHJ should be provided with a copy of the technical brief, as necessary.

5.5.4 Notify MCSA Fire Services of the intent and invite their participation in project planning for new facility or extensive facility modification.

NOTE

The Project manager should become familiar with the D&D guidelines for FP as delineated in DOE-STD-1066-2023, Appendix F, *Transitional Facilities*, and work with FPE to implement the D&D guidelines.

From Appendix F: “Fire safety and emergency response for transitional facilities are governed by the requirements contained in 10 CFR Part 851, *Worker Safety and Health Program*, (including 29 CFR Part 1926, *Safety and Health Regulations for Construction*) and the provisions of the National Fire Protection Association (NFPA) Standard 241, *Safeguarding Construction, Alteration and Demolition Operations*. (See also FM Global Loss Prevention Data Sheet 1-0, *Safeguards During Construction*, and Chapter 8 of NFPA 801, *Standard for Fire Protection for Facilities Handling Radioactive Materials*.)”

Project Manager

5.5.5 With MCSA FPE support, develop task specific FP criteria necessary to mitigate the risk of a fire event. This criteria can be identified in the task work plan and/or activity hazard analysis and should include:

- Control of flammable/combustible liquids
- Control of combustible materials and ignition sources
- Emergency response and fire emergency notification procedures
- Hazards control including hot work

5.5.6 Ensure emergency egress features are maintained consistent with the requirements for buildings under construction as defined in NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*, and any specific controls as determined by the MCSA FPE.

5.5.7 Locked and abandoned facilities where there is no human occupancy may not need to maintain emergency egress features such as emergency lighting, illuminated exit signs, etc. Paths of egress shall be maintained should access to the facility be required to perform periodic surveillances.

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 16 of 25

5.5.8 Deactivation and eventual removal of any FP features from an abandoned facility shall be justified either through a TFHA or a Technical Assessment. A deactivation plan shall be prepared as a step-out plan to ensure the systems are properly de-commissioned and de-energized. Where service connections to the sites underground fire water mains or central alarm system must be disconnected the step-out plan will be coordinated with MCSA Fire Services. Approvals for deactivation shall be approved as follows:

- The MCSA CAHJ shall be the site's approving authority for deactivation of a fire suppression/detection/alarm system.

5.5.9 Ensure retained FP features in abandoned facilities and facilities undergoing D&D are inspected, tested, and maintained, consistent with established procedures, sufficient to ensure that they will function effectively during a fire. Where defects or design deficiencies are discovered that are not critical to effective performance, as determined by the MCSA CAHJ, such defects or deficiencies may remain uncorrected.

5.5.10 Ensure abandoned facilities and facilities undergoing D&D are routinely inspected by representatives of MCSA Fire Services to familiarize them with existing conditions and to revalidate any pre-fire plans.

5.6 Fixed Fire Protection Systems

Facility Managers

5.6.1 Ensure minimum requirements for operation of the following FP features are maintained:

- Fire doors
- Fire rated walls

SOCCo FP Liaison

5.6.2 With the support of MCSA Fire Services, ensure minimum requirements for operation of the following FP features are tracked and maintained:

- Fire detection and alarm systems
- Fire suppression systems
- Portable fire extinguishers

5.6.3 **IF** FP features or systems will be out of operation, **THEN** ensure compensatory measures are implemented until operation is restored in consultation with the MCSA FPE and CAHJ.

TITLE:		DND-FP-PDD-00001
	Fire Protection Program Description	REV. NO. 0
		Page 17 of 25

- 5.6.4 Ensure inspection and testing of fire detection/suppression systems and equipment are being performed by MCSA Fire Services in accordance with the applicable MCSA FP procedures.
- 5.6.5 IF applicable, THEN ensure tracking and corrective actions of significant findings and recommendations are performed per DND-QP-PRO-00020.
- 5.6.6 Coordinate FP system outage activities between the Facility Manager and MCSA Fire Services, as needed.

5.7 Portable Fire Protection Systems

NOTE

Portable fire extinguishers, for employee use on a voluntary basis, are provided in accordance with 29 CFR 1910.157, *Portable Fire Extinguishers*, and are selected and distributed per NFPA 10, *Standard for Portable Fire Extinguishers*.

SOCCo FP Liaison

- 5.7.1 Coordinate with MCSA Fire Services to ensure portable fire extinguishers are provided in SOCCo managed facilities.
- 5.7.2 Verify fire extinguishers are being maintained and inspected by the MCSA Fire Services on a monthly basis.

All Supervisors

- 5.7.3 For special D&D tasks or work activities that are located outside a main structure, establish a location where the fire extinguishers and other essential emergency equipment will be stored and maintained.

5.8 Flammable/Combustible Materials

NOTE

Applicable codes and standards are listed in Source Documents.

Facility Managers

- 5.8.1 Ensure the effective control of ignition sources by complying with DND-FP-PRO-00005, *Combustible Control Program*.
- 5.8.2 Ensure the storage, processing, and handling of flammable and combustible liquids are in accordance with applicable codes, standards, and procedures (See DND-FP-PRO-00071, *Flammable and Combustible Liquids*).
- 5.8.3 Ensure the storage, processing, and handling of flammable and combustible materials are in accordance with applicable codes, standards, and procedures (See DND-FP-PRO-00005).

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 18 of 25

- 5.8.4** Ensure positive control of flammable and combustible materials is kept by inventorying, tracking, and documenting the types and amounts of flammable and combustible materials. This should also include locations and storage configurations of the items.

SOCCo FP Liaison

- 5.8.5** Coordinate with MCSA FPE manager to obtain MCSA FPE technical support as requested by other SOCCo organizations on the site involved in hazard communication activities, such as defined by OSHA 1910.1200, *Hazard Communication*.

- 5.8.6** Document combustible loading inspections according to DND-FP-PRO-00005.

5.9 MCSA Fire Investigation Support

Project Manager

- 5.9.1** Coordinate with MCSA FP Services to create an investigation team using MCSA fire officers, MCSA and SOCCo engineers, or multidiscipline teams, as warranted.
- 5.9.2** Using a graded approach, prepare a lessons learned document for appropriate project distribution to the Environmental Safety, Health, and Quality (ESH&Q) Manager and MCSA CAHJ/Fire Chief to ensure prevention of recurrence.
- 5.9.3** Contact MCSA FP Services to provide technical assistance and guidance in the execution of a fire investigation as directed by the Project Manager.

5.10 Annual Fire Protection Summary Report

SOCCo FP Liaison

- 5.10.1** Coordinate with the MCSA CAHJ/Fire Chief for the development of an Annual Fire Protection Summary Report.
- 5.10.2** Coordinate any assistance needed from SOCCo personnel to assist MCSA CAHJ/Fire Chief in developing/preparing Annual Fire Protection Summary Report.
- 5.10.3** Submit final report per contract requirements.

6.0 DEFINITIONS/ACRONYMS

6.1 Definitions

- A. Contractor Authority Having Jurisdiction (CAHJ)** – The decision-making authority in matters concerning fire protection for MCSA (DOE is the overall site AHJ). The MCSA CAHJ responsibilities for FP systems reside with the MCSA Fire Services for PORTS Site.

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 19 of 25

- B. Equivalency** – The approved alternate means of satisfying the technical provisions of a FP code or standard.
- C. Exemption** – The approved deviation from a non-statutory code, standard or DOE Order.
- D. Fire Hazard Analysis (FHA)** – An FHA is an analysis of a facility or fire area(s) that are used to assure compliance with the objectives of DOE Orders. There are 3 types of FHAs and are defined as:
- **Preliminary Fire Hazard Analysis (PFHA)** – A PFHA is developed in conjunction with a Preliminary Safety Analysis Report (PSAR) or Safety Analysis Document (SAD) as a basis for determining FP requirements. This type of report is more subjective in nature and used for planning purposes for identifying minimum requirements that a design must meet.
 - **Fire Hazard Analysis (FHA)** – An FHA is a quantitative analysis of a facility or fire area(s) that comprehensively assess and document the risks and vulnerabilities from fire and explosion perils within individual facility or fire area. FHAs are used as a support document for preparing the Documented Safety Analysis (DSA). The conclusions of the FHA must be incorporated in the DSA.
 - **Transitional Fire Hazard Analysis (TFHA)** – Transitional facilities are those that have been placed in a safe-shutdown condition and abandoned or are undergoing D&D work and ultimately demolition or abandonment. The TFHA is an evaluation of fire risks imposed by the work in relation to the need for traditional fire safety features. The TFHA or technical assessment shall be reviewed and concurred with by the MCSA CAHJ and DOE.
- E. Fire Protection (FP)** – A broad term which encompasses all aspects of fire safety, including: building construction and fixed building fire features, fire suppression and detection systems, fire water systems, emergency process safety control systems, emergency firefighting organizations (fire departments, fire brigades, etc.), fire protection engineering, and fire prevention. Fire protection is concerned with preventing or minimizing the direct and indirect consequences of fire. It also includes aspects of the following perils as they relate to FP: explosions, natural phenomenon, smoke, and water damage from fire.
- F. Fire Protection Engineer (FPE)** – Fire Protection Engineers report to the Fire Protection Manager and are responsible for design review, specification requirements, building surveys, support to other site organizations and some fire investigations. Fire Protection Engineers are also responsible for annual review and periodic revision of the FHAs. Fire Protection Engineers are either graduates of a technical program or have at least 6 years’ experience in fire protection work.

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 20 of 25

- G. Fire Protection System (FPS)** – Any system designed to detect, extinguish, and limit the extent of fire damage or enhance life safety. Where redundant FP systems are required, any two of the following will satisfy that requirement. These include:
- Automatic suppression systems, such as fire sprinklers, foam, gaseous, explosion suppression, or other specialized extinguishing systems plus appropriate alarms. An adequate supply, storage, and distribution system is an essential element.
 - Automatic fire detection, occupant warning, manual fire alarm, and fire alarm reporting systems combined with properly equipped and adequately trained fire departments or brigades.
 - Fire barrier systems or combinations of physical separation and barriers for outdoor locations.
 - Other systems, such as alternate process control systems, as approved by the MCSA CAHJ.
- H. Graded Approach** – The manner of completing an evaluation/document/analysis that sets a level of detail/rigor with the level of importance/significance of the element being addressed. The graded approach sets the level of detail in the document and is determined by the author and the MCSA CAHJ.
- I. Highly Protected Risk (HPR)** – The facility as characterized by a level of fire protection design, systems, and management controls to fulfill requirements for the best-protected class of industrial risks.
- J. Safety Basis** – Those aspects of the facility design basis and operational requirements relied upon by DOE to authorize operation. These aspects are considered to be important to the safety of facility operations. The safety authorization basis includes (if they exist for a specific facility) approved Documented Safety Analysis (DSAs), Hazard Analyses, Technical Safety Requirements (TSRs), Preliminary Hazard Surveys (PHSs), Inactive Waste Site (IWS) documents, Transportation Safety Documents (TSDs), DOE Safety Evaluation Reports (SERs), and facility specific commitments.
- K. SOCCo Employees and Contracted Labor Resources** – Any employee working on the SOCCo D&D Project.

6.2 Acronyms

- A. BNA** – Baseline Needs Assessment
- B. COR** – Code of Record
- C. CLR** – Contracted Labor Resource
- D. D&D** – Decontamination and Decommissioning

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 21 of 25

- E. DOE** – Department of Energy
- F. DSA** – Documented Safety Analysis
- G. FPP** – Fire Protection Program
- H. FPTs** – Fire Protection Technical Specialist
- I. HPR** – Highly Protected Risk
- J. IH** – Industrial Hygiene
- K. IA** – Independent Assessment
- L. ISMS** – Integrated Safety Management System
- M. MCSA** – Mission Conversion Services Alliances
- N. NFPA** – National Fire Protection Association
- O. PORTS** – Portsmouth Gaseous Diffusion Plant
- P. SOCCo** – Southern Ohio Cleanup Company LLC
- Q. TSR** – Technical Safety Requirement

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 22 of 25

Appendix A
REGULATORY REQUIREMENTS FLOW DOWN

1. 10 CFR 851, *Worker Safety and Health Program*
2. DOE Order 420.1C, *Facility Safety* (latest revision)
3. DOE-STD-1066-2023, *Fire Protection*
4. National Fire Protection Association (NFPA) Codes and Standards
5. International Building Code or applicable State of Ohio codes

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 23 of 25

Appendix B
CROSS-REFERENCE DOE O 420.1C, FACILITY SAFETY TO FBP PORTSMOUTH FIRE PROTECTION PROGRAM
Page 1 of 3

420.1C, Facility Safety, Chapter II	FPP Section	Implementing Procedures
1. Objectives	2.0	DND-FP-PDD-00001 , <i>Fire Protection Program Description (MCSA Blue-Sheeted Document)</i>
2. Applicability	2.0	DND-FP-PDD-00001 , <i>Fire Protection Program Description</i>
3. Requirements	2.0	DND-FP-PDD-00001 , <i>Fire Protection Program Description</i>
3.a(1)	4.1	DND-FP-PDD-00001 , <i>Fire Protection Program Description</i>
3.a(2)	4.1	DND-FP-PDD-00001 , <i>Fire Protection Program Description</i>
3.a(2)(a)(b)(c)	4.1	DND-FP-PDD-00001 , <i>Fire Protection Program Description</i>
3.b	4.2	DND-FP-PDD-00001 , <i>Fire Protection Program Description</i>
3.c.(1)	4.3	FBP-FP-PRO-00043 , <i>Design Review (MCSA Blue-Sheeted Document)</i> DND-NSE-PRO-00095 , <i>Conduct of Engineering</i>
3.c.(3)(a)	4.1	FBP-FP-PDD-00001 , <i>Fire Protection Program Description (MCSA Blue-Sheeted Document)</i>
3.d.(1)	4.2 4.2.15	Multiple Fire Protection Site Procedures FBP-FP-PRO-00006 , <i>Fire Hazard Analysis (MCSA Blue-Sheeted Document)</i> FBP-FP-PRO-00042 , <i>Fire Protection Facility Assessment (MCSA Blue-Sheeted Document)</i>
3.d.(1)(a)	4.2.3	Multiple Fire Protection site Procedures
3.d.(1)(b)	4.2.3	BNA, MCSA Fire Services Procedures and Protocol, Training
3.d.(1)(c)	4.2.3	BNA, MCSA Fire Services Procedures and Protocol, Training
3.d.(1)(d)	4.2.3	BNA, MCSA Fire Services Procedures and Protocol, Training
3.d.(1)(e)	4.2.3	Multiple Site Specific and SOCCo Procedures Applicable NFPA Codes and Standards
3.d.(1)(f)	4.2.3	FBP-FP-PRO-00063 , <i>High Pressure Fire Water System (HPFW) Program</i> Fire Services Procedures and Protocol (<i>MCSA Blue-Sheeted Document</i>)
3.d.(1)(g)	4.2.3	FBP-FP-PRO-00072 , <i>Welding, Burning, and Hot Work (MCSA Blue-Sheeted Document)</i> FBP-FP-PRO-00043 , <i>Design Review (MCSA Blue-Sheeted Document)</i>
3.d.(1)(h)	4.2.6	FBP-FP-PRO-00006 , <i>Fire Hazard Analysis (MCSA Blue-Sheeted Document)</i> DND-FP-PRO-00005 , <i>Combustible Control Program</i> DND-HR-POL-00056 , <i>Smoking Policy</i>
3.d.(1)(i)	4.2.3	Multiple Site Specific and SOCCo FP Procedures Applicable NFPA Codes and Standards
3.d.(1)(j)	5.4.11	DND-FP-PDD-00001 , <i>Fire Protection Program Description</i>
3.d.(2)	4.2.5	Various Fire Protection site and SOCCo FP Procedures
3.d.(2)(a)	4.2.9	BNA, MCSA Fire Services Procedures and Protocol, Training

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 24 of 25

Appendix B
CROSS-REFERENCE DOE O 420.1C, FACILITY SAFETY TO FBP PORTSMOUTH FIRE PROTECTION PROGRAM

Page 2 of 3

3.d.(2)(b)	4.2.3	FBP-FP-PRO-00043 , <i>Design Review (MCSA Blue-Sheeted Document)</i>
3.d.(2)(c)	5.4.11	DND-FP-PDD-00001 , <i>Fire Protection Program Description</i>
3.d.(2)(d)	4.2.8	DND-FP-PDD-00001 , <i>Fire Protection Program Description</i> POEF-DND-020 , <i>Safety Management Program Description for SOCCo Portsmouth Decontamination & Decommissioning Project</i>
3.e.(1)(a)1	4.2.9	FBP-FS-BNA-00001 , <i>Baseline Needs Assessment for PORTS Fire Services (MCSA Blue-Sheeted Document)</i>
3.e.(1)(a)2	4.2.9	FBP-FS-BNA-00001 , <i>Baseline Needs Assessment for PORTS Fire Services (MCSA Blue-Sheeted Document)</i>
3.e.(1)(a)3	4.2.9	FBP-FS-BNA-00001 , <i>Baseline Needs Assessment for PORTS Fire Services (MCSA Blue-Sheeted Document)</i>
3.e.(1)(b)	4.2.9	FBP-FS-BNA-00001 , <i>Baseline Needs Assessment for PORTS Fire Services (MCSA Blue-Sheeted Document)</i>
3.e.(1)(c)	4.2.9	FBP-FS-BNA-00001 , <i>Baseline Needs Assessment for PORTS Fire Services (MCSA Blue-Sheeted Document)</i>
3.e.(1)(d)	4.2.9 4.2.14	FBP-FS-BNA-00001 , <i>Baseline Needs Assessment for PORTS Fire Services (MCSA Blue-Sheeted Document)</i> DND-NSE-PRO-00046 , <i>Management Self Assessments for Readiness</i>
3.e.(1)(e)	4.2.10	FBP-FP-PRO-00006 , <i>Fire Hazard Analysis (MCSA Blue-Sheeted Document)</i>
3.e.(2)	4.2.11	FBP-FP-PRO-00043 , <i>Design Review (MCSA Blue-Sheeted Document)</i> DND-NSE-PRO-00095 , <i>Conduct of Engineering</i>
3.e.(3)(a)	4.1	FBP-FP-PDD-00001 , <i>Fire Protection Program Description (MCSA Blue-Sheeted Document)</i>
3.e.(3)(a)	4.3.1	Multiple Fire Protection Site Procedures FBP-FP-PRO-00006 , <i>Fire Hazard Analysis (MCSA Blue-Sheeted Document)</i> FBP-FP-PRO-00042 , <i>Fire Protection Facility Assessment (MCSA Blue-Sheeted Document)</i>
3.e.(3)(b)	4.2.3	BNA, MCSA Fire Services Procedures and Protocol, Training (<i>MCSA Blue-Sheeted Document</i>)
3.e.(3)(c)	4.2.3	BNA, MCSA Fire Services Procedures and Protocol, Training (<i>MCSA Blue-Sheeted Document</i>)
3.e.(3)(d)	4.2.3	BNA, MCSA Fire Services Procedures and Protocol, Training (<i>MCSA Blue-Sheeted Document</i>)
3.f.(1)	4.2.3	Multiple Site Specific MCSA Procedures Applicable NFPA Codes and Standards

TITLE: Fire Protection Program Description	DND-FP-PDD-00001
	REV. NO. 0
	Page 25 of 25

Appendix B

CROSS-REFERENCE DOE O 420.1C, FACILITY SAFETY TO FBP PORTSMOUTH FIRE PROTECTION PROGRAM

Page 3 of 3

3.F. (2)	4.2.9	Multiple Site Specific MCSA Procedures FBP-FP-PDD-00001 , <i>Fire Protection Program Description</i>
3.g	4.2.3	FBP-FS-PL-0001 , <i>PORTS Wildland Fire Protection Plan (MCSA Blue-Sheeted Document)</i>