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Level 2 Program Description Document (PDD)

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1.0 PURPOSE

1.1 This document provides direction for administering the Emergency Management Program and ensuring the program meets established Department of Energy (DOE) requirements. This Program Description Document (PDD) has been developed to implement applicable requirements from the following:

- DOE Order 151.1D, *Comprehensive Emergency Management System*
- FBP-EM-PL-00026/NWD-PORTS-22-8108/DUF₆-PLN-045, *Site Emergency Plan*

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 document applies to Fluor-BWXT Portsmouth LLC (FBP), North Wind Dynamics LLC (NWD), Mid-America Conversion Services, LLC, subcontractor personnel, DOE, and contracted labor resources supporting Emergency Management activities at Portsmouth Gaseous Diffusion Plant (PORTS).

2.2 This document applies to the American Centrifuge Operating, LLC (ACO) on site.

2.3 This PDD applies to site specific emergency actions undertaken by the Resource Conservation and Recovery Act (RCRA) Contingency Plan and emergency actions under the FBP Spill Prevention, Control, and Countermeasure (SPCC) Plan.

3.0 PROGRAM DOCUMENTS

3.1 PROGRAMMATIC

DOE Order 151.1D, states the contractor is responsible for complying with the requirements of this Contractor Requirements Document (CRD), regardless of the performer of the work. The contractor is responsible for flowing down the requirements of this CRD to subcontractors at any tier to the extent necessary to ensure the contractor's compliance with the requirements. That is, the contractor must (1) ensure that it and its subcontractors comply with the requirements of this CRD to the extent necessary to ensure the contractor's compliance and (2) only incur costs that would be incurred by a prudent person in the conduct of competitive business.

The contractor must establish and maintain a documented emergency management program that implements the requirements of applicable Federal, State, and local laws, regulations, and ordinances for fundamental worker safety programs (e.g., fire, safety, and security).

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In addition to the requirements set forth in this CRD, contractors are responsible for complying with applicable Attachments 2, 3, 4, 5, and 6 to DOE O 151.1D, referenced in and made part of this CRD and which provide program requirements and/or information applicable to contracts in which this CRD is inserted. References to a DOE directive in this CRD or in its attachments refer to the CRD associated with the referenced DOE directive. Refer to Appendix R, *Sections of DOE 151.1D, Not Applicable to FBP Emergency Management Program*, for information about sections of DOE Order 151.1D, which are not applicable to the FBP Emergency Management Program.

Contractors may meet the requirements of this order by implementing nationally recognized standards or host institutions applicable standards, with prior approval through the formal equivalency and exemption process.

3.1.1 DOE Order 151.1D, requires DOE sites develop an integrated and comprehensive Emergency Management Program commensurate with site hazards to ensure that:

- Emergencies are promptly recognized, categorized, and classified
- Emergencies are reported immediately
- Appropriate response measures are taken to protect workers, the public, the environment, and national security
- Reentry activities are properly and safely accomplished
- Recovery and post-emergency activities commence promptly

3.1.2 DOE Order 151.1D, uses the concept of an *Operational Emergency* which is a major unplanned or abnormal event or condition that involves or affects DOE/National Nuclear Security Administration (NNSA) facilities and activities by causing or having the potential to cause serious health and safety or environmental impacts; requires resources from outside the immediate/affected area or local event scene to supplement the initial response; and, requires time-urgent notifications to initiate response activities at locations beyond the local event scene. This includes any accident/incident involving an offsite DOE shipment containing hazardous materials that causes the initial responders to initiate protective actions at locations beyond the immediate/affected area. Operational Emergencies may be classified using a three-tier emergency classification system. The three-tier classification levels are Alert, Site Area Emergency (SAE), and General Emergency (GE).

3.1.3 DOE Order 151.1D, requires DOE sites to have an Emergency Operations System to provide centralized collection, validation, analysis and coordination of information related to an emergency. The Emergency Operations System supports on-scene response during an escalating incident by relieving the burden of site-level and external communication and securing additional resources needed for the response. It does not provide tactical direction to the Incident Commander (IC). The requirement for an Emergency Operations System is satisfied through an established Emergency Operations Center (EOC).

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3.2 SITE SPECIFIC

- 3.2.1** At PORTS, a *lead* and *event* contractor concept is used. The lead contractor at PORTS is FBP-BWXT. Other DOE contractors which have a presence at the site are designated as event contractors for purposes of emergency management and emergency response.
- 3.2.2** With the implementation of this PDD, periodic reviews of the majority of Emergency Management performance documents and controlled documents will be completed on a three year cycle. This is a change from past practice of using a one year cycle. Emergency Management Subject Matter Experts (SMEs), along with the Emergency Management Manager, consider each document individually in order to assign the periodic review cycle.
- 3.2.3** WebEOC® which is a commercial, web-enabled information management software, is available in the primary EOC and the primary Joint Information Center (JIC). As a web-based product, WebEOC® allows for remote access for monitoring emergency response. In addition, information pertinent to emergency response is immediately available to authorized users.
- 3.2.4** The FBP Continuity of Operations Plan (COOP) provides the basis for comprehensive continuity planning (e.g., determination of essential supporting activities, delegation of authority, communication requirements, human capital, and vital records). The plan describes FBP’s response to various disruptive events, including epidemic and pandemic events, and includes the recovery and reconstitution of Decontamination and Decommissioning (D&D), Waste Management, and Environmental Remediation activities, equipment, and services that are considered Mission Critical Systems after a disaster. The COOP Emergency Relocation Group (ERG) Center is located in the X-1020 EOC.
- 3.2.5** The applicable elements of DOE Order 151.1D, Attachment 3, *Emergency Management Core Program* and Attachment 4, *Emergency Management Hazardous Material Program*, are combined in this PDD in Section 5.0, *Emergency Management Program Description*. The non-applicable sections of DOE Order 151.1D, are addressed in Appendix R, of this document.
- 3.2.6** The Appendices of this PDD are used to list the implementing procedures for each part of Section 5.0, *Emergency Management Program Description*; to describe the review, revision, approval, and distribution of Emergency Management documents; and to list the FBP Emergency Management exceptions to DOE Order 151.1D.

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4.0 PROGRAM RESPONSIBILITIES

4.1 Function

The functions of the Emergency Management Program are based on the programmatic elements of DOE Order 151.1D, and site specific requirements, including those needed to address responses to RCRA and SPCC-based emergencies:

- Program Administration and Management
- All-Hazards Planning Basis/Technical Planning Basis
- Emergency Response Organization
- Emergency Operations System
- Training and Drills
- Emergency Medical Support
- Offsite Response Interfaces
- Emergency Categorization and Emergency Classification
- Protective Actions
- Consequence Assessment
- Emergency Facilities and Equipment/Systems
- Notifications and Communications
- Emergency Public Information
- Termination and Recovery
- Readiness Assurance

4.2 Organization

- 4.2.1** The FBP Site Project Manager is responsible and accountable to DOE for the overall day-to-day operation of FBP-BWXT and D&D activities, including activation of the COOP and designating ERG membership.
- 4.2.2** The Emergency Services (ES) Director, whom is accountable to the FBP Site Project Manager, is responsible for designating the FBP Emergency Services Manager.

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- 4.2.3** The FBP Emergency Management Manager is accountable to the FBP Emergency Services Manager and is responsible for administering the Emergency Management Program.
- 4.2.4** Directors and managers are responsible for assigning personnel under their supervision to the Emergency Response Organization (ERO) and COOP ERG. These assignments include staffing for the EOC and JIC, as well as ensuring personnel are available to staff the field ERO. Directors and managers provide other support to the Emergency Management Program for drills, exercises, scenario design teams, and areas of subject matter expertise. In addition to providing manpower for these functions, directors and managers may serve in these roles.
- 4.2.5** The Plant Shift Superintendents (PSS) are delegated authority for representing the Site Project Manager on shift and managing site operations. PSSs are accountable for serving as Incident Commander (IC) during an emergency and serving as the Crisis Manager (CM), if needed. Due to a reduction in minimum staffing in the X-300 Plant Control Facility, the PSS/IC may not respond to the field. When this occurs, the Fire Services Shift Commander serves as the On-Scene Commander. The PSSs report to the Site Shift Operations Manager.
- 4.2.6** The Emergency Management Manager is responsible for the X-220R Public Warning Siren.
- 4.2.7** A qualified Facility Manager is appointed facility custodian responsibilities for the X-1020 EOC and the X-220R Public Warning Siren.
- 4.2.8** The Radiation Protection Manager is accountable to the Environment, Safety, Health, and Quality (ESH&Q) Director and is responsible for staffing field monitoring teams with qualified personnel.
- 4.2.9** The Protective Force Manager is accountable to the Site Project Manager and is responsible for providing on scene security.
- 4.2.10** Facility Managers provide support to the Emergency Management Program by serving as Local Emergency Directors (LEDs) or appointing LEDs. Facility Managers are accountable for their facilities and informing Emergency Management about changes to storage of hazardous materials and other modifications that require revisions to emergency planning documents.
- 4.2.11** Employees are required to report emergencies, participate in protective action drills, comply with Emergency Action Plans (EAPs), and follow the direction of the IC, On-Scene Commander, and CM. Employees may be required to support Emergency Management in other activities, such as additional drills, exercises, and training.

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- 4.2.12** The Depleted Uranium Hexafluoride (DUF₆) Emergency Management Program Manager serves as the Event Contractor for incidents involving DUF₆ and complies with the plans and procedures of the Lead Contractor. The DUF₆ Emergency Management Program Manager is required to provide information to FBP Emergency Management for the technical basis documents, emergency planning documentation, and staffing the EOC and JIC.
- 4.2.13** The NWD Safety and Health Manager serves as the liaison to the FBP Emergency Management Program. NWD is an Event Contractor for incidents involving NWD and follows the plans and procedures of the Lead Contractor. The NWD Safety and Health Manager is required to provide information to FBP Emergency Management for the technical basis documents, emergency planning documentation, and staffing the EOC and JIC.
- 4.2.14** The ACO Fire Safety/Emergency Management Manager serves as the liaison to the FBP Emergency Management Program. ACO is an Event Contractor for incidents involving ACO and follows the plans and procedures of the Lead Contractor. The Fire Safety/Emergency Management Manager provides information to FBP Emergency Management for the technical basis documents, emergency planning documentation, subject matter experts, and staffing the EOC and JIC as needed.
- 4.2.15** The Emergency Management staff is normally required to serve as either EOC cadre members, JIC cadre members, or COOP ERG members. The staff serves as SMEs for procedures and other preparedness documents, maintains ERO training qualifications, and provides assistance to regulatory inspectors and auditors in the conduct of external inspections and audits.

4.3 FBP Emergency Management Manager or Designee/Lead Contractor

- 4.3.1** The FBP Emergency Management Manager is accountable to DOE for ensuring the requirements of DOE Order 151.1D, are administered on a site-wide basis. Additionally, the FBP Emergency Management Manager is accountable for maintaining Emergency Management documentation:
- Emergency Management Plans
 - Emergency Management Implementing Procedures
 - Emergency Management Policies
 - Mutual Aid Agreements
 - Hazards Surveys
 - Emergency Planning Hazard Assessment
 - Threat and Hazard Identification and Risk Assessment

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- COOP

4.3.2 The FBP Emergency Management Manager oversees activities to ensure the Emergency Management Program remains compliant. These include:

- Coordinating with other plant groups
- Coordinating activities of the Emergency Management staff
- Identifying the need for primary and alternate facilities related to the Emergency Management Program, such as EOC and JIC
- Coordination of the development of Emergency Management facilities
- Identifying EOC and JIC staffing requirements and assignments
- Compliance with site requirements
- Compliance with the elements of the Emergency Management Core Program and Emergency Management Hazardous Materials Program.

4.3.3 Emergency operating essential records are identified and maintained in accordance with FBP-BS-PRO-00099, *Essential Records*.

4.3.4 The FBP Emergency Management Manager oversees an Emergency Management Program that:

- Protects employees, the public, and the environment.
- Identifies adequate resources to meet all contractual and regulatory requirements.
- Reviews FBP contract requirement changes for the Emergency Management Program to evaluate cost, impact, and implementation schedules.
- Addresses relevant changes to Emergency Management documents on an annual basis or as needed with offsite agencies.

4.3.5 The Emergency Management Program is designed to comply with Federal, State, and local regulations.

4.3.6 Emergency Plan Implementing Procedures (EPIPs) are developed, reviewed, and revised as needed, and new or revised EPIPs state responsibilities and actions to be taken by individual groups or individuals in response to an emergency condition.

4.3.7 Event Contractors are invited to meet to discuss Emergency Management activities and issues.

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4.3.8 PORTS tenant organization(s) are invited to meet to discuss Emergency Management activities and issues.

4.3.9 FBP subcontractor projects are reviewed to ensure the Emergency Management Program requirements applicable to the subcontract scope are flowed down and implemented by the subcontractor.

5.0 EMERGENCY MANAGEMENT PROGRAM DESCRIPTION

5.1 Program Management and Administration

NOTE

Program administration and management must be established to provide effective organizational management and administrative control of the site emergency management program by establishing and maintaining authorities and resources necessary to plan, develop, implement, and maintain a viable, integrated, and coordinated Comprehensive Emergency Management System.

- 5.1.1** An individual is designated to administer the Emergency Management Program who:
- A.** Is responsible for and has authority for day-to-day operations and maintenance of the emergency management program.
 - B.** Has access to management personnel who have authority for site resources and operations.
 - C.** Briefs senior leadership on the emergency management program and their expected roles and responsibilities during an emergency. This briefing must be conducted initially and when changes occur that modify their roles and responsibilities.
 - D.** Ensures emergency management planning is integrated with other applicable programs and associated documents (e.g., Baseline Needs Assessment, Site Security Plan, Cybersecurity Plan, Continuity of Operations Plan, Documented Safety Analysis, and Threat and Hazard Identification and Risk Assessment Guide).
 - E.** Oversees implementation of the emergency management plan in accordance with the requirements of this Order.
 - F.** Approves and/or concurs on planning documents addressing the program elements.
 - G.** Ensures the Emergency Management Program addresses the requirements of the elements of the Emergency Management Core Program and the Emergency Management Hazardous Material Program.

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- 5.1.2** An all-hazards emergency management plan (Site Emergency Plan) is developed and maintained. The all-hazards emergency management plan must be:
- A.** Reviewed and documented annually, and updated, if appropriate, and approved no less than every three years;
 - B.** Updated if there are significant changes to the program plan (i.e., changes to organization structure, Emergency Planning Zones, etc.); and
 - C.** Submitted to the Field Element Manager or appropriate Federal Manager for approval.
- 5.1.3** Procedures are developed and maintained that describe how the all-hazards emergency management plan must be implemented and maintained.
- 5.1.4** A controlled document system is used for the all-hazards emergency management plan and related procedures and documentation.
- 5.1.5** A process is identified for review, approval, and distribution of the all-hazards emergency management plan and related procedures and documentation. Refer to Appendix B, *Process for Review, Approval, and Distribution of Emergency Management Documentation*.
- 5.1.6** Agreements are developed and maintained for the transport, acceptance, and treatment of potentially contaminated injured personnel, as applicable. Refer to Appendix C, *Memorandum of Agreements*.
- 5.1.7** Interoperability, integration, and interface are addressed with jurisdictional responders for severe incidents with regional impacts.
- 5.1.8** Emergency management documents are reviewed for classified information and Controlled Unclassified Information.
- 5.1.9** Emergency operating essential records are identified and maintained in accordance with FBP-BS-PRO-00099.

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5.2 All-Hazards Planning Basis/Technical Planning Basis

All-Hazards Survey

NOTE

An All-Hazards Survey must be performed. Its purpose is to identify all hazards that are applicable to the operations at PORTS and establishes the planning basis for the emergency management program. Each All-Hazards Survey may cover single or multiple facilities or activities, or one All-Hazards Survey may cover an entire site.

- 5.2.1** The applicable potential health, safety, or environmental impacts are described.
- 5.2.2** The need for development of further planning and preparedness beyond the Emergency Management Core Program requirements that will apply to each type of hazard are identified.
- 5.2.3** Be submitted for approval to the Field Element Manager or appropriate Federal Manager; and be updated every 3 years from date of issuance, and when there are significant changes to site operations or to hazardous material inventories. For example:
- A.** Significant changes may include new hazardous materials operations.
 - B.** Recognition of hazards not previously identified.
 - C.** Changes that would result in a positive Unreviewed Safety Question (USQ) for nuclear facilities.
 - D.** Changes that result in a reduction of hazards with no adverse effect on safety or emergency preparedness or response may be included in the next scheduled review and update.
- 5.2.4** Performing an All-Hazards Survey. The All-Hazard Survey must:
- A.** Address the following:
 - Natural hazards, which result from acts of nature, such as hurricanes, earthquakes, tornadoes, animal disease outbreak, pandemics, or epidemics.
 - Technological hazards, which result from accidents or the failures of systems and structures, such as hazardous materials releases, or dam failures.
 - Human-caused incidents, which result from an intentional or unintentional action, taken by person(s) or an adversary, such as a safety mishap or a threatened or actual chemical attack, biological attack, or cyber incident.

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- B.** Conducting a Threat and Hazard Identification and Risk Assessment (THIRA) in accordance with the Department of Homeland Security, Comprehensive Preparedness Guide (CPG) 201, *Threat and Hazard Identification and Risk Assessment Guide*, is included. This analysis is conducted using the CPG to identify potential hazards, threats, capability targets, and resources. The THIRA template (Appendix A of the CPG) is used to document and maintain the assessment.
- This analysis and planning should include consequences with respect to hazardous material (e.g., petroleum, propane) overpressure (e.g., 1 psi) or radiant heat dose (e.g., second-degree burn) exposures from explosions or fires involving flammable inventories, including fuel oil and gases. Additionally, when “oil” is a part of a process containing or collocated with another hazardous material, it must be considered in the EPHA as a possible initiator or contributor for the release of that hazardous material.
 - Large scale storage inventories of fuel oil and gases (e.g., petroleum, propane) must be analyzed in the THIRA and addressed in emergency management planning using appropriate guidance.
 - Facility/activity emergency planning, preparedness, and response must take into account the hazards associated with explosives. 10 CFR 851 provides requirements for explosives safety. DOE-STD-1212-2012, *Explosives Safety*, provides additional information. A graded approach must be applied based on the explosive’s Hazard/Division class.
 - A summary of the THIRA must be included in the annual Emergency Readiness Assurance Plans (ERAP) for submission to its Program Secretarial Officer and the Associate Administrator, Office of Emergency Operations.
- C.** For severe events, the reliance on local/regional offsite responders and how the site will handle severe incidents if these response resources are not available is considered.

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5.2.5 The hazardous material screening process identifies specific hazardous materials and quantities that, if released, could produce impacts consistent with the definition of an Operational Emergency. The potential release of these materials to the environment requires further analysis in an EPHA. The release of hazardous materials less than the quantities listed below does not require quantitative analysis in an EPHA. Categories to be considered under the All-Hazards Survey includes sites with radiological materials, hazardous biological agents and toxins, and hazardous chemicals.

- A.** All hazardous materials (i.e., radiological, biological agent/toxin, chemical, and explosive) at a DOE site are to be considered in the screening.
- If the hazardous material screens out by quantity or by exclusion from the screening, response plans are developed to address smaller scale incidents and emergencies.
 - If the hazardous material does not screen out, and is not covered by the exclusions below, an Emergency Planning Hazards Assessment (EPHA) must be conducted.
- B.** Each hazardous material container and its associated process is evaluated separately, unless one of the following conditions exists, in which case the total quantity of the hazardous material must be used when determining if it exceeds the applicable screening threshold:
- Container is interconnected with other containers.
 - Multiple containers are located within a facility such that a credible common event (excluding extreme malevolent acts and catastrophic release scenarios such as major fires, airplane crashes, and building collapse) could result in release of the contents of multiple containers.
- C.** Exclusions
- Materials used in the same form, quantity, and concentration as a product packaged for distribution and use by the general public (e.g., consumer products for household use).
 - Materials that because their physical form, or other factors (e.g., plausible dispersal mechanisms), do not present an airborne exposure hazard. This includes solid materials in a form with particle size > 10 microns and solid materials with no plausible release scenario to reduce the material to particles < 10 microns; liquids with a vapor (partial) pressure of <10 mmHg at 25°C; and aqueous solutions where the hazardous component(s) is a non-volatile solute.
 - Explosives are excluded from further analysis in an EPHA, regardless of the facility designation (e.g., nuclear facility), provided the explosives are also screened through the Chemical screening criteria.

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- Radioactive materials that may be excluded include: sealed radioactive sources that are engineered to pass the special form testing specified by Department of Transportation (DOT) or the American National Standards Institute; materials stored in DOT Type B shipping containers with overpack if the Certificates of Compliance are current and the materials stored are authorized by the Certificate; and, materials used in exempt, commercially available products.
- Simple asphyxiates and cryogenic materials may be excluded as long as the material cannot impact collocated populations, but will be analyzed in the THIRA.
- Fuel oil and gases (e.g., petroleum, propane) are excluded in the definition of hazardous materials used in this Order.

D. Radiological Materials:

- Radioactive materials that require further analysis in an EPHA are those associated with a defined Hazard Category 1, 2, or 3 nuclear facility per 10 CFR Part 830, *Nuclear Safety Management*; specifically those materials contributing to the categorization of such a facility when in quantities greater than the largest Category 3 value (or if the sum of the ratios) exceeds any of the following:
 - DOE-STD-1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance*, with DOE Order 5480.23, *Nuclear Security Analysis Reports*
 - NA-1 SD G 1027, Change Notice 1, *Using Release Fraction and Modern Dosimetry Information Consistently*, with DOE STD 1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance*, with DOE Order 5480.23, *Nuclear Safety Analysis Reports, dated 11-28-11*
 - LA-12981-MS, Table of DOE-STD-1017-92, *Hazard Category 3 Threshold Quantities for the ICRP-30 List of 757 Radionuclides, Los Alamos National Laboratory (LANL) Fact Sheet, 2002*
 - LA-12846-MS, *Specific Activities*, and DOE-STD-1027-92 *Hazard Category 2 Thresholds, LANL Fact Sheet, 1994*

E. Chemicals:

- All chemicals in a facility/activity with known or suspected toxic properties are subjected to a hazardous material screening process.

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- Chemicals that may be excluded from further analysis in an EPHA include: materials used in the same form, quantity, and concentration as a product packaged for distribution and use by the general public; materials that have a Health Hazard rating of 0, 1 or 2 based on National Fire Protection Association (NFPA) 704; or solid or liquid materials that, because of their physical form or other factors (e.g., plausible dispersal mechanisms), do not present an airborne exposure hazard.
 - Chemical hazardous materials that require further analysis in an EPHA include chemicals with an assigned Health Hazard rating of 3 or 4 based on NFPA 704 in quantities greater than a quantity that can be “easily and safely manipulated by one person” [see 29 CFR 1910.1450(b)]. Chemicals without an assigned Health Hazard rating require further analysis in an EPHA if the quantity is greater than a quantity that can be “easily and safely manipulated by one person.” Quantities of chemical hazardous materials considered to be "easily and safely manipulated by one person" can be locally-determined in accordance with the provisions of 29 CFR 1910.1450(b).
 - Ordinary products of combustion (e.g., carbon monoxide, hydrogen cyanide, etc. that are released in fires involving hydrocarbons, building components, wood, plastic), are exempt from analysis when associated with a scenario involving a combustion event.
- F.** Chemical wastes require further analysis if the storage quantities exceed those above and the concentration is comparable to that which would require such a similar classification (i.e., very dilute and chemically neutralized chemical waste does not require a further analysis).
- 5.2.6** General Duty. **IF**, based on the THIRA and the professional judgment of the person(s) performing or approving the All-Hazards Survey, **THEN** it is determined that additional analysis and planning is warranted, the Field Element Manager (FEM) will determine and document if an additional EPHA will be performed.

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Emergency Planning Hazards Assessment (EPHA)

NOTE

An Emergency Planning Hazards Assessment (EPHA) must be prepared and used to define the provisions of the Emergency Management Hazardous Materials Program, ensuring the program is commensurate with the hazards identified. The EPHA provides the basis for establishing a graded approach that will meet the program requirements. DOE sites with federally regulated biological agents and toxins require an EPHA, however, quantitative analysis is not required.

- 5.2.7 Hazards and the potential consequences from unplanned releases of (or loss of control over) hazardous materials found during the Hazards Surveys, using accepted industry assessment techniques are identified.
- 5.2.8 Receptor locations of interest for each facility containing significant quantities of hazardous materials are identified including:
- 30 meters from the release location
 - 100 meters from the release location
 - Site boundary
 - Emergency response facilities
 - Nearest assembly areas as identified in the Emergency Plan
 - Nearest offsite at risk population such as emergency buildings, schools, and hospitals
- 5.2.9 Analyzed scenarios using short descriptive names are identified with:
- Tabulated consequences for each scenario at identified receptor locations above.
 - Consequences versus distance under conservative and average dispersion conditions. Conservative is defined as a DOE site's 95% worst case or F stability and a wind speed of 1.5 m/s. Average is defined as a DOE site specific average or D stability and a wind speed of 3 m/s.
 - Distances at which the Protective Action Criteria (PAC) and thresholds of early lethality would be exceeded at receptors identified above. The PAC for releases of hazardous materials are listed below.
 - For radioactive material - the Protective Action Guides promulgated by the Environmental Protection Agency (EPA) must be used.

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- For chemicals, the protective action criteria, listed in order of preference, must be used: Acute Exposure Guideline Levels (AEGs) promulgated by the EPA; Emergency Response Planning Guidelines (ERPGs) published by the American Industrial Hygiene Association; and Temporary Emergency Exposure Limits (TEELs) developed by DOE. For these criteria, the exposure level to be used represents PAC-2 level, i.e. no irreversible health effects.

- 5.2.10** Depending upon the dispersion model used and other factors, the accuracy of most available models may be inaccurate beyond 25 miles. If results go beyond the 25 miles, the distance is reported as 25 miles; if applicable, farther distances may be reported for information.
- 5.2.11** Analyze scenarios where the same severe event triggers hazardous materials releases from multiple facilities and contain information about the impact of simultaneous or sequential hazardous materials releases from identified receptors above. This can be documented in the EPHA or a site level supplemental planning document. If the EPHA indicates the potential for an Alert, SAE, or GE, use the results of the analysis to determine the necessary personnel, resources, and equipment for the Emergency Management Hazardous Materials Program (taking into account approved baseline needs determined through implementation of DOE O 420.1C, *Facility Safety*).
- 5.2.12** If the quantitative analysis indicates that all incidents evaluated, based on the results of screening, would be classified as less than an Alert, an EPHA is not required to be maintained. The results of the hazardous material screening process and the quantitative analysis may be incorporated directly into the All-Hazards Survey, or may be incorporated by reference in the All-Hazards Survey. Analysis below Threshold Quantity levels for chemicals or below Threshold Quantity for Hazard Category 3 for radiological materials is not required during EPHA and Emergency Action Level (EAL) development.
- 5.2.13** A determination of the size of the Emergency Planning Zone (EPZ) is included.
- 5.2.14** A consolidated/integrated EPZ for the site is prepared and submitted for approval to the Field Element Manager or appropriate Federal Manager.
- 5.2.15** Assumptions, methodology, models, and evaluation techniques used in the EPHA are documented and discussed. The EPHA must document functioning and non-functioning control measures and engineered safety systems (e.g. containment systems, fire suppression systems, filters, administrative controls, safeguards and security systems).
- 5.2.16** An accurate and timely method for tracking changes in operations, processes, or accident analyses that involve hazardous materials (e.g., introduction of new materials, new uses, significant changes in inventories, modification of material environments) is established and maintained. The method must allow sufficient time for emergency management personnel to review the EPHA and modify plans and procedures, as necessary.

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- 5.2.17** The analysis of severe events performed as part of the documented safety analysis is integrated into emergency planning. For Defense Nuclear Facilities, include potential events, ranging from low-consequence, high-probability events to high-consequence, low-probability events, to ensure a comprehensive picture of the types of events and the range of associated consequences that could occur at a facility, is captured.
- 5.2.18** Integrate severe event guidance consistent with DOE Guide 421.1-2, *Implementation Guide for Use in Developing Documented Safety Analysis*, to meet Subpart B of 10 CFR 830, DOE-STD-3009-2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*, and DOE-STD-1189-2016, *Integration of Safety into the Design Process*, or their updates.
- 5.2.19** The EPHA is submitted for approval to the Field Element Manager or appropriate Federal Manager.
- 5.2.20** The EPHA is reviewed no less than every three years, and updated if appropriate, or prior to significant changes to the site or hazardous material inventories. For example, significant changes are those changes which would result in a positive USQ for nuclear facilities, as defined in 10 CFR Part 830, *Nuclear Safety Management*.
- 5.2.21** If the triennial review of the EPHA determines there are no updates required, a letter to the Field Element Manager or appropriate Federal Manager is submitted to document the review and provide notification that an update is unnecessary.
- 5.2.22** Changes that result in a reduction of hazards with no adverse effect on safety or emergency preparedness and response may be included in the next scheduled review and update.
- 5.2.23** An EPHA is developed for shipments that do not satisfy governing DOT regulations and specifications for commercial hazardous materials transport; however, if a shipment satisfies DOT regulations and specifications, then an EPHA is not required.
- 5.2.24** Site specific EALs for the spectrum of potential Operational Emergencies identified by the EPHA are developed and protective actions are included for each corresponding EAL.
- 5.2.25** The emergency management program is adjusted to be commensurate with hazards that remain after a decontamination and decommission action is completed at each DOE closure site.

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5.3 Emergency Response Organization

NOTE

An Emergency Response Organization (ERO) is a structured organization with overall responsibility for initial and ongoing emergency response.

- 5.3.1 Each DOE site establishes and maintains an ERO.
- 5.3.2 Personnel with capabilities and resources based on the all hazards planning basis make up the ERO.
- 5.3.3 An individual ERO position with the authority to implement the site emergency management plan to include management and control of all aspects of the site response is assigned.
- 5.3.4 A primary and at least one alternate for each ERO position is designated and trained, excluding first responders in the field, to be available to implement the emergency management plan for initial and ongoing emergency response.
- 5.3.5 An effective first responder capability to mitigate all hazard emergencies is established, including emergency medical, fire, hazard material, and applicable rescue emergencies as derived through the Baseline Needs Assessment, Hazard Survey, and THIRA. The site shall be capable of managing the first operating period of emergency events of Type 4 complexity as defined by the National Incident Management System (NIMS).
- 5.3.6 Mechanisms consistent with NIMS are established for expanding the initial response capability when local resources are no longer adequate to control the emergency incident.
- 5.3.7 Control is established at the event/incident scene in accordance with the Incident Command System (ICS) portion of the National Incident Management System (NIMS) or integrate ERO activities with those of local and federal agencies and organizations that provide onsite emergency response services in accordance with ICS/NIMS.
- 5.3.8 Designated ERO members are provided with a method of identification for access to assigned emergency response consistent with NIMS/ICS.

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5.4 Emergency Operations System

NOTE

DOE sites must have an Emergency Operations System to provide centralized collection, validation, analysis and coordination of information related to an emergency. The Emergency Operations System supports on-scene response during an escalating incident by relieving the burden of site-level and external communication and securing additional resources needed for the response. It does not provide tactical direction to the Incident Commander in the field. This can be satisfied through an established EOC.

- 5.4.1** An Emergency Operations System is established to provide strategic management, operational support, planning/intelligence, logistics and finance/administration.
- 5.4.2** The Emergency Operations System performs the following functions:
- An overall responsibility for supporting and coordinating the response to an emergency is established and maintained.
 - The basic NIMS/ICS concepts of common terminology, management unity and delegation of authority, managing by objectives, manageable span of control, and action planning are used.
 - For any declared Operational Emergency impacting the DOE site, activate the Emergency Operations System, or may activate for other significant incidents and planned events when emergency management and leadership decides support operations would be advantageous to the successful management of the incident/event.
 - The scale of the level of activation is based on the severity of the incident. Staffing and functions must be performed as identified in the emergency management plan.
 - The Incident Commander is provided support and the Emergency Operations System has the ability to maintain support status under emergency conditions for an extended period based upon the All-Hazards Survey.
 - Standard operating procedures and checklists are used to:
 - Activate the Emergency Operations System, identify and notify staff, make it operational, and deactivate it.
 - Establish communications and coordination with incident command.
 - Obtain and maintain situational awareness and disseminate a Common Operating Picture among response components and external partners, as applicable.

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- Develop plans to support:
 - Operations by defining overall priorities
 - Establishing operational objectives
 - Establishing personnel accountability
 - Establishing the Operational On-duty Period for the ERO staffing shift changes

5.5 Training and Drills

NOTE

A comprehensive, coordinated, and documented program of training and drills must be an integral part of the emergency program to ensure that preparedness activities for establishing and maintaining program-specific emergency response capabilities are accomplished.

5.5.1 Worker Training

- Training to workers on hazards and protective actions they may be expected to take in accordance with the all-hazards planning basis is documented and provided. For those workers who are likely to witness a hazardous material release, the training must include notification of the release to proper authorities.
- This training must be provided and documented initially and when there are changes affecting worker actions or responsibilities, and refresher training must be provided annually. If a protective action is performed successfully during a drill, exercise, or actual event, the annual training requirement is met for that protective action.
- Information is provided on protective actions to visitors who have unescorted access.
- Based upon the results of the all hazards planning basis, determine if additional training must be provided to workers at specific facilities. This training may consist of facility-specific procedures for safe shutdown/walk-away provisions and/or facility-specific response steps to take when there are disruptions to critical infrastructure (e.g., power and communications).

5.5.2 Emergency Response Organization Training

- A training and qualification program is developed to establish and maintain specific emergency response capabilities as determined by the all hazards planning basis. The training requirements are documented to include the courses, method of instructions, frequency, and intended audience. Assess ERO member's proficiency at least annually.

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- ERO training must be provided initially and when there are significant changes to expected emergency response capabilities. Refresher training must be provided no less than annually.
- ERO training must include the following:
 - Self-Study, classroom training, or drills
 - Training on EPHAs and EALs to appropriated ERO members
 - Emergency categorization and classification training to those personnel who perform this function
- The following is included in ERO training:
 - Initial Training for ERO members must include:
 - The applicable principles of ICS 100, *Introduction to ICS*, and ICS 700, *NIMS, An Introduction*
 - Site specific emergency response concept of operations (as documented in the emergency management plan), as applicable to each position
 - Position specific roles and responsibilities to include plans, procedures, job aids, and associated equipment and systems
 - Refresher training must include:
 - Lessons learned
 - Best practices
 - Identified gaps or deficiencies on individual training

5.5.3 Offsite Response Agency Orientation

- Orientation is offered on the site specific conditions and hazards based on the results of the all hazards planning basis, including familiarization, on an annual basis for any emergency responders.

5.5.4 Worker Drills

- Building evacuation drills are conducted at least annually, or consistent with frequency in applicable NFPA standards, and state or local regulations. Evacuation drills must also be conducted after substantial changes are made to a building that change evacuation procedures/pathways.

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- Based upon the results of the all hazards planning basis, determine if additional drills and the frequency of such drills should be conducted for other protective actions that workers may be expected to take. These drills may include facility specific procedures for safe shutdown/walk-away provisions and facility specific response steps to take when there are disruptions to critical infrastructure.

5.5.5 ERO Drills

- Drills are conducted and documented so that each ERO member participates at least annually. This may be accomplished by participation in a drill, exercise, or actual incident. Additionally, emergency response personnel (e.g., fire, HAZMAT, emergency medical services) that perform essentially the same functions on an ERO as they do on a day-to-day basis, demonstrate proficiency doing their everyday jobs.
- Improvements and lessons learned are captured to make program improvements to training and drills.
- Drill scenarios representative of the hazards/threats identified in the all-hazards planning basis are used. Such drills should be conducted for demonstration of capabilities.
- Drills determined to be needed to supplement exercises for ERO activities involving hazardous materials releases based upon the EPHAs are developed and conducted.

5.5.6 First Response Agencies

- Applicable offsite first responders (e.g., primary first response agencies) are formally invited to participate in a relevant drill or exercise at least annually.
- First Response Agencies. The training and drills programs must make training available on unique hazards, as appropriate, to emergency responders, both primary and mutual aid. This may include equipment, hazardous materials identified in the EPHA, or facility configuration.

5.6 Emergency Medical Support

- #### 5.6.1
- Planning is conducted for medical treatment associated with incidents identified in the all hazards planning basis (e.g., mass casualty situations, treatment of onsite responders). Pre-planning with off-site responder resources must address how they integrate emergency medical support in accordance with applicable NFPA standards (e.g., NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*).

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- 5.6.2 Provisions are established for sharing of patient information between onsite and offsite health care providers during emergencies, consistent with the requirements of P.L. 104-191, *Health Insurance Portability and Accountability Act of 1996*, and the Privacy Act, 42 U.S.C. Sec. 552a.
- 5.6.3 For sites containing hazardous materials, document the process to transport, accept and treat contaminated, and injured personnel. Ensure implementing agreements, as may be appropriate, for example: emergency medical first responder organizations, medical receiving facilities, emergency medical transport services, including all reasonable modes of transportation.

5.7 Offsite Response Interfaces

NOTE

DOE sites must establish and maintain interfaces with local, state, and federal organizations responsible for emergency response or who may be used to supplement response capabilities based on threats/hazards identified in the all hazards planning basis to include planning for severe events. DOE sites must accomplish the following activities with offsite response organizations.

- 5.7.1 Orientation is offered on the site specific conditions and hazards based on the results of the all hazards planning basis, including familiarization, on an annual basis for any emergency responders.
- 5.7.2 Applicable offsite first responders (e.g., primary first response agencies) are formally invited to participate in a relevant drill or exercise at least annually.
- 5.7.3 Access protocols for routine, abnormal, and emergency conditions are determined.
- 5.7.4 A process is established for communications for use during onsite response.
- 5.7.5 A process is established to coordinate emergency public information during an incident involving response by the offsite responder(s) for incidents that may affect or be of interest to the media and public.
- 5.7.6 Protective actions recommended offsite based upon the results of EPHAs are addressed.
- 5.7.7 A notification process is determined to use during emergencies when protective actions may be recommended offsite.
- 5.7.8 Information from EPHA analyses is provided to appropriate state and county agencies on bounding event scenario distance at which PAC would be exceeded and plume arrival times at specific offsite receptors, so that offsite organizations can make decisions regarding the appropriate level of preparedness and response.

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5.7.9 For Emergency Management Hazardous Materials Program facilities with General Emergencies involving radiological material releases, adequate planning is performed for offsite radiological monitoring support to local and state governments.

5.8 Emergency Categorization and Classification

5.8.1 DOE sites must declare an Operational Emergency when incidents occur that represent a significant degradation in the level of safety at a site resulting in potential health and safety hazards to workers or the public.

5.8.2 Operational Emergencies must be categorized as promptly as possible, but no later than 15 minutes after identification by the predetermined decision maker for the categorization, in accordance with the emergency management plan, but no more than 30 minutes from initial discovery. Such incidents include the following:

- Health and Safety. The following incidents or conditions represent, cause, or have the potential to cause serious health and safety impacts to workers or members of the public.
 - The discovery of radioactive or other hazardous material contamination from past DOE operations that may have caused, is causing, or may reasonably be expected to cause uncontrolled personnel exposures exceeding protective action criteria (PAC).
 - An occurrence (e.g. earthquake, tornado, aircraft crash, fire, or explosion,) that causes significant structural damage to DOE facilities, with confirmed or suspected personnel injury or death.
 - Any mass casualty incident, as determined and documented by the site.
 - A criticality event.
 - An offsite hazardous material incident not associated with DOE operations that is observed to have, or is predicted to have, an impact onsite such that protective actions are required for DOE workers.
- Environment. The following incidents or conditions represent, cause, or have the potential to cause serious detrimental effects on the environment:
 - Any actual or potential release of hazardous material or regulated pollutant to the environment that could result in significant offsite consequences, such as major wildlife kills, wetland degradation, aquifer contamination, or the need to secure downstream water supply intakes.

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- Offsite DOE Transportation Activities. The following incidents or conditions represent an actual or potential release of hazardous materials from a DOE shipment:
 - Any accident/incident involving an offsite DOE shipment containing hazardous materials that causes the initial responders to initiate protective actions at locations beyond the immediate/affected area.
- Safeguards and Security. Security incidents are also subject to reporting in accordance with DOE O 470.4B, *Safeguards and Security Program*, or other directives as applicable. Per this Order, foreign involvement in security incidents must be reported to the Counterintelligence Directorate within the Office of Intelligence and Counterintelligence. The following incidents or conditions represent, cause, or have the potential to cause degradation of security or safeguards conditions with actual or potential direct harm to people or the environment. Security and Safeguard Operational Emergencies include:
 - Unplanned detonation of an explosive device or a credible threat of detonation resulting from the location of a confirmed or suspected explosive device.
 - An actual terrorist attack, active threat (e.g., armed assault), cyber security incident that impacts critical infrastructure, or sabotage incident involving a DOE site.
 - Kidnapping or taking hostage(s) involving a DOE site.

NOTE

In addition to the emergency categorization requirements, DOE sites with an Emergency Management Hazardous Material Program must also have provisions to classify incidents involving the actual or potential airborne release of (or loss of control over) hazardous materials from an onsite facility/activity as an Alert, SAE, or GE based on health effects parameters measured or estimated at 30 meters, 100 meters, and the site boundary and compared with the appropriate protective action criterion.

5.8.3 Procedures are established to classify Operational Emergencies (as an Alert, SAE, and GE) based upon the appropriate PAC listed below.

- For radioactive material, the Protective Action Guides promulgated by the Environmental Protection Agency (EPA) must be used.
- For chemicals, the PAC, listed in order of preference, must be used: Acute Exposure Guideline Levels (AEGLs) (60-minute values/level 2) promulgated by the EPA; Emergency Response Planning Guidelines (ERPGs) (level 2 values) published by the American Industrial Hygiene Association; and TEELs (level 2 values) developed by DOE.

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5.8.4 An Alert, SAE, or GE, is classified in order of increasing severity, when incidents occur that represent a specific threat to workers and the public due to the release or potential release of significant quantities of hazardous materials. Classification aids in the rapid communication of critical information and the initiation of appropriate time-urgent emergency response actions. The classification levels are:

- A. Alert** - An Alert must be declared when incidents are predicted, are in progress, or have occurred that result in an actual or credible threat of substantial degradation in the level of control over hazardous materials under one or more of the following situations.
 - The radiation dose from any release to the environment of radioactive material or a concentration in air of hazardous chemical material is expected to exceed the applicable protective action criterion at or beyond 30 meters but not beyond 100 meters from the point of release or beyond the site boundary.
- B. Site Area Emergency** - A SAE must be declared when incidents are predicted, in progress, or have occurred that result in an actual or credible threat of substantial degradation in the level of control over hazardous materials under one or more of the following situations.
 - The radiation dose from any release of radioactive material or concentration in air from any release of other hazardous material is expected to exceed the applicable protective action criterion at or beyond 100 meters from the point of release but not at or beyond the site boundary.
- C. General Emergency** - A GE must be declared when incidents are predicted, in progress, or have occurred that result in an actual or credible threat of substantial degradation in the level of control over hazardous materials under one or more of the following situations.
 - The radiation dose from any release of radioactive material or a concentration in air from any release of other hazardous chemical is expected to exceed the applicable protective action criterion at or beyond the site boundary.

5.8.5 Each emergency classification level requires an appropriate response. Actions required for response to an Operational Emergency must be implemented.

- A. Alert** - Declaration of an Alert requires activation of the ERO, without the JIC.
- B. Site Area Emergency** - Declaration of a SAE requires activation of the ERO, without the JIC, plus notification and assembly of emergency response personnel and equipment to activate response centers and to establish communications, consultation, and liaison with offsite authorities.

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C. General Emergency - Declaration of GE requires full activation of the ERO, including the JIC, plus the notification, mobilization, and dispatch of all appropriate emergency response personnel and equipment, including appropriate DOE emergency response assets, and liaison with offsite authorities for the recommendation of predetermined public protective actions.

5.8.6 Emergencies, once categorized, must not be downgraded to a lower significance category unless the original categorization was incorrect. An event determined to be an emergency will remain so until the emergency response is terminated. In general, the emergency classification (i.e., Alert, SAE, or GE) should not be downgraded until termination of the event. However, emergency classification must be reviewed periodically to ensure the classification is commensurate with response activities.

5.9 Protective Actions

NOTE

DOE sites must identify protective actions commensurate for the potential hazards of the site and maintain procedures for prompt issuance of protective actions to workers. Protective actions must be predetermined and serve to minimize emergency-related consequences and maximize life safety and health.

- 5.9.1** Pre-determined protective actions are developed for hazards/threats identified in the all hazards planning basis.
- 5.9.2** A process is developed to issue protective actions.
- 5.9.3** A procedure is developed to account for employees.
- 5.9.4** Consider whether additional protective actions are needed for severe incidents, such as self-help instructions when the site is isolated from outside response assistance and evacuation of the site when conditions are deteriorating.
- 5.9.5** Predetermined onsite protective actions and offsite protective action recommendations consistent with the hazard (internal vs. external exposure) and duration of the release (short vs. long) based upon the results of EPHAs are identified.
- 5.9.6** Incidents in which combinations of protective actions for varying facilities/activities may apply are identified and evaluated.
- 5.9.7** Authorities are identified for the lifting or adjustment of protective actions, once protective actions have been taken.
- 5.9.8** Methods are established for controlling, monitoring, and maintaining records of personnel exposures to hazardous materials.

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- 5.9.9** Methods are established for controlling access to contaminated areas and for decontaminating personnel or equipment exiting the area.
- 5.9.10** Actions are identified that may be taken to increase the effectiveness of protective actions, such as shutdown of heating, ventilation, and air conditioning during sheltering-in-place.
- 5.9.11** An Incident Commander qualified at the 29 CFR 1910.120(q)(6)(v) level may use standard industry practices (e.g., DOT/ERG, MSDSs, etc.) in accordance with Occupational Safety and Health Administration (OSHA) 1910.120 for initial immediate protective actions. For EPHA facilities, verification that the initial immediate protective actions are consistent with the technical planning basis (i.e., EPHA/EALs) for the facility is required within 15 minutes of protective action issuance and implementation.

5.10 Consequence Assessment

NOTE

DOE sites with an Emergency Management Hazardous Material Program must compute and correctly assess in a timely manner throughout the emergency the estimates of onsite and offsite consequences of actual or potential releases of hazardous materials that consider site specific characteristics (i.e., topography, meteorology).

- 5.10.1** Provisions are established to conduct consequence assessment that is:
 - Integrated with emergency classification and protective action decision-making.
 - Incorporated with facility and field indications and measurements, as required per the Emergency Management Plan.
 - Coordinated with offsite agencies.
- 5.10.2** Provisions are established to conduct a timely initial assessment with the worst-case source term from the EAL using current meteorological conditions or if information is available, the actual source term based on known incident conditions from observations and indicators using current meteorological conditions for onsite and offsite consequences.
- 5.10.3** The capability to use the National Atmospheric Release Advisory Center as part of near real-time consequence assessment activities for the mode (primary, backup, corroborating) selected by the site is maintained.
- 5.10.4** Facility/site meteorological data and information on source terms for actual or potential release of hazardous materials to the atmosphere are available or can be made available to National Atmospheric Release Advisory Center (NARAC) in a timely manner to facilitate near real-time computations.

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5.10.5 Consequence assessment and atmospheric dispersion modeling resources are maintained, with the capability to:

- Conduct timely initial assessment by producing a plume projection product for the worst-case and actual source term described in paragraph 5.10.2 above.
- Indicate the distance to which PAC is exceeded to aid in protective action decision-making for workers and first responders and to establish the basis for initial field monitoring activities.
- Conduct continuous ongoing assessment for the duration of the emergency as additional information (e.g. field data, source term) becomes available.
- Maintain field monitoring capabilities to perform field monitoring activities to confirm the plume boundaries as required per the Emergency Management Plan.

5.11 Emergency Facilities and Equipment/Systems

NOTE

DOE sites are responsible for the provision of adequate emergency facilities and equipment/systems commensurate with the associated hazards/threats identified in the all hazards planning basis. Equipment must be maintained and tested, as applicable, to ensure equipment functions as designed for emergency response and implementation of protective actions based upon the all hazards planning basis.

5.11.1 Personal Protective Equipment

- DOE sites must provide appropriate personal protective equipment (PPE) to emergency responders commensurate to the hazards present in the working environment.
- DOE sites must identify in the emergency management plan, or other documentation, caches of specialty equipment, (e.g., PPE, stretchers, evacuation chairs, and self-rescuers for underground facilities) that may be required if an emergency occurs.

5.11.2 Communications Equipment

- DOE sites must have an emergency notification system capable of providing immediate notification and protective actions to affected employees but no later than 10 minutes after the protective actions have been identified in accordance with the emergency management plan and related procedures. Communications equipment must be tested annually, or more frequently as necessary for the notification system (e.g. post-maintenance testing, communication equipment upgrades).

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- EOC primary and backup communications capabilities adequate to support incidents identified in the EPHAs are maintained.
- Equipment capable of transmitting information in a secured fashion if classified or controlled unclassified information is generated, handled, or stored by the site, is maintained.

5.11.3 Emergency Operations System

- DOE sites must maintain systems and/or facilities to support emergency response operations. These must include communications capabilities and systems adequate to support ERO activities and communications with Headquarters Watch Office.

5.11.4 A facility for use as an Emergency Operations Center is designated and maintained. The EOC must:

- Be accessible on a twenty-four hour basis to authorized onsite and offsite ERO members.
- Be equipped with systems and equipment to support EOC activities, e.g., information management, mapping, and secure and non-secure communications.
- Be equipped with an information management system that provides a single access point for collection and dissemination of emergency event information and provides status reports to the Headquarters Emergency Operations Center.

5.11.5 Alternate Emergency Operations Center (AEOC). Maintain an AEOC capability (e.g., physical, virtual, or mobile) that can perform the key functions of the primary EOC if the primary EOC is not available. Any physical AEOC must be located so both it and the primary EOC are not impacted by the same incident as determined by the results of the EPHAs. AEOC must be located outside the EPZ or located so both it and the primary are not impacted by the same incident (i.e., upwind from the prevailing wind direction).

5.11.6 Joint Information Center

- Provisions are in place to establish a Joint Information Center (JIC) to serve as a working location, where multiple jurisdictions gather, process and disseminate public information during an emergency.
- Equipment and systems are maintained to support JIC activities to include public inquiry, media inquiry, media monitoring, media support services, and management and administrative activities.
- A location for the JIC outside the EPZ is identified.

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5.11.7 Meteorological Monitoring Equipment

- A meteorological capability is maintained to provide real-time onsite/local meteorological data and maintain access to meteorological expertise for site consequence assessments.
- The onsite data collection, processing, and availability must meet current guidance and standards and must be appropriate for the level of incident possible per current guidance and standards (DOE O 458.1, *Radiation Protection of the Public and the Environment* and DOE-HDBK-1216-2015, *Environmental Radiological Effluent Monitoring and Environmental Surveillance*).
- Maintain or access a meteorological modeling capability or access to reliable real-time offsite meteorological data to conduct proper offsite consequence assessment activities if the site has EPHA results that indicate the potential for a GE.

5.12 Notifications and Communications

NOTE

Initial notifications must be made promptly, accurately, and effectively to all appropriate stakeholders. Follow-up notifications must be made when conditions change and when the Operational Emergency is terminated.

5.12.1 Notifications

- Prompt emergency notifications to emergency response personnel and response organizations are provided.
- Immediate notification and protective actions are provided to affected employees no later than 10 minutes after the protective actions have been identified in accordance with the emergency management plan and related procedures.
- The Field Element or appropriate Federal Manager, Headquarters Watch Office, and state, and local organizations are notified within 30 minutes of declaration or termination of an Operational Emergency.
- **IF** the Emergency Operations System is activated for an incident not categorized as an Operational Emergency, **THEN** the site must notify the Field Element and Headquarters Watch Office within 30 minutes of the Emergency Operations System becoming operational in accordance with the emergency management plan.

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- Emergency notification to the Headquarters Watch Office must consist of a phone call providing as much information as is known at the time and be provided electronically with receipt confirmation. If information is unknown at the time of the report, specify so in reporting. The initial notification must include:
 - The description of the emergency
 - Date and time emergency was discovered or terminated
 - Damage and casualties
 - Protective actions implemented
 - Potential and actual impacts
 - Agencies involved
 - Level of public/media attention
 - Contact information

5.12.2 Communications

- Continuing effective communications among response organizations throughout an emergency are provided.
- Communication methods among on-scene responders, emergency managers, and response facilities are provided.
- Updates are provided to Headquarters based upon the emergency conditions and/or as directed by Headquarters.
- Provisions are established to provide updates to workers during an emergency.
- Communications checks are initiated on classified and unclassified communications systems used for initial notification of the Headquarters Watch Office annually or more frequently as necessary for the communications system (e.g., post-maintenance testing, communication system upgrades).
- Communications among response facilities, field response elements, and offsite command centers provide a common operating picture of the emergency response and shared situational awareness among all teams. This must be accomplished by enabling access to unclassified emergency response information, such as notification forms, emergency status updates, plume projections, significant events data, and field monitoring data.

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5.12.3 Local, state, and federal authorities are notified of classified Operational Emergencies within 15 minutes of categorization.

5.13 Emergency Public Information

NOTE

DOE sites must provide accurate, candid, and timely information to workers, the media, and the public during an emergency.

5.13.1 An emergency public information program consistent with the all hazards planning basis is established and maintained.

5.13.2 The emergency public information program is documented in an emergency public information plan or in the emergency management plan. This plan must include:

- Identification of personnel, resources, and facilities necessary to support emergency public information activities to include identification of a Public Information Officer(s) who will interact with the media during emergencies.
- Provisions for coordination of information to be released during an emergency.
- Identification of public information media to be used and monitored, such as web sites, social media, news releases, and news briefings.
- Identification of a location(s) for the necessary briefings and news conferences regarding the emergency.
- Identification of training and drills for personnel who will interact with the media.
- Identification of provisions for coordination of public information activities with offsite response agencies, state, local and tribal governments, and federal emergency response plans, as appropriate.
- For situations involving classified or controlled unclassified information, provisions for information review by an appropriate official before release to ensure that no classified or controlled unclassified information is contained in the announcement.
- Provisions for initial news releases or public statements to be approved by the Field Element official responsible for emergency public information review and dissemination.

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- Provisions to coordinate with the Headquarters Emergency Operations Center Public Affairs Watch Officer and/or Office of Public Affairs on information released after the initial release. This includes information released through news releases and social media. The Headquarters Public Affairs Duty Officer or Office of Public Affairs may delegate this to local level dependent on the incident.

5.13.3 DOE sites with an Emergency Management Hazardous Materials Program must also maintain staff and expertise to perform emergency public information activities that include:

- Public and media inquiry activities.
- Availability of personnel with technical expertise related to the emergency.
- Coordination and direction by the Field Element Manager or appropriate Federal Manager public affairs manager or designee.

5.14 Termination and Recovery

5.14.1 Termination

- Predetermined criteria for termination of emergencies must be established. Emergency termination occurs when emergency response activities are terminated, the situation has been stabilized, potential threats to workers, the public, the environment, and national security have been characterized, conditions no longer meet established emergency categorization criteria, and it appears unlikely that conditions will deteriorate.
- The decision to terminate the emergency is coordinated with the responding organizations and the Field Element or appropriate Federal Manager, as applicable.
- The Headquarters Watch Office and other organizations previously notified are notified when the emergency is terminated.
- The decision to terminate an Operational Emergency classified as an Alert, SAE, or GE must be based on the perceived need for the ERO to remain fully active to monitor and manage the situation. The decision to terminate an Operational Emergency not requiring classification must be a formal announcement or formal acknowledgement that the situation is stabilized and the response activity is ending or has been substantially scaled back.

5.14.2 Recovery

- Prior to termination identify and document in a draft recovery plan the organization (e.g., recovery organization) that will activate and address the actions necessary to restore the site to normal operations.

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- The recovery organization must include accident investigation, as needed, to ensure accident investigation is conducted in accordance with DOE O 225.1B, *Accident Investigations*.
- Recovery from a terminated Operational Emergency must include: communication and coordination with State, and local government and Federal agencies.
- The means must exist for estimating exposure to hazardous materials and for protecting workers and the general public from exposure during reentry and recovery activities.
- Recovery procedures must include: dissemination of information to Federal, State, and local organizations regarding the emergency and possible relaxation of public protective actions; planning for decontamination actions; establishment of a recovery organization; development of reporting requirements; and establishment of criteria for resumption of normal operations.

5.14.3 Post Incident Reporting

- An After Action Review of the Emergency Operations System is conducted when it is activated for an actual incident or condition to identify lessons learned and/or corrective actions. If the Emergency Operations System was activated for an Operational Emergency, the performance review is documented in an After Action Report.
- For an Operational Emergency, the after action report is submitted to the Field Element Manager or appropriate Federal Manager for further dissemination to the Associate Administrator, Office of Emergency Operations, and Program Secretarial Officer(s). This report may be done in conjunction with the Final Occurrence Report in accordance with DOE O 232.2, *Occurrence Reporting and Processing of Operations Information*.

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5.15 Readiness Assurance

NOTE

DOE sites must participate in a formal Readiness Assurance Program that establishes a framework and associated mechanisms for assuring that emergency plans and procedures and resources are adequate by ensuring they are sufficiently maintained, exercised, and evaluated, and that appropriate and timely improvements are made when identified. The Readiness Assurance Program serves to ensure the readiness and effectiveness of an emergency management program on a programmatic and performance level while promoting a culture of continuous improvement. The Readiness Assurance Program consists of evaluations, improvements, and the Emergency Readiness Assurance Plan.

5.15.1 Evaluations consist of assessments, exercises, and performance indicators.

- Assessments. DOE sites must conduct assessments to ensure that emergency plans, procedures, emergency response activities, and resources are adequate and sufficiently maintained.
 - Self-assessments are conducted annually. The self-assessment must address all program elements; however, the scope of each program element assessment does not have to include all aspects of the associated programmatic or response tasks each year. This determination must be based upon the complexity of the program and ensure that all program elements are fully assessed and/or validated through exercises over a five-year period.
 - Support DOE during the conduct of an external assessment
- Exercises. DOE sites must conduct an annual site-level exercise to test and validate emergency plans and procedures.
 - The exercise program must be consistent with the Department of Homeland Security Exercise and Evaluation Program.
 - The scenario for the annual exercise is rotated among the hazards and risks identified in the all hazards planning basis.
 - The annual exercise schedule is provided to the Field Element Manager or appropriate Federal Manager.
 - An exercise plan is prepared.
 - The exercise plan for the annual evaluated site-level exercise is submitted to the Field Element Manager or appropriate Federal Manager for approval no less than 30 calendar days prior to the exercise.

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- After action reports must include the results of the evaluation to include findings, issues, and improvement items, and be prepared and submitted within 45 calendar days of the exercise. After action reports for the annual exercise must be submitted to the Field Element Manager or appropriate Federal Manager.

NOTE

In addition to the readiness assurance requirements above, DOE sites with an Emergency Management Hazardous Material Program must also establish and maintain a site-level exercise program that validates its emergency response capability to the hazards identified in EPHAs.

- A formal exercise program is developed that includes:
 - A matrix that identifies planned exercises over the next five years and elements tested.
 - Rotation among scenarios identified in the Technical Planning Basis.
 - Exercise scenarios involving radiological hazardous materials, if applicable.
 - A method for determining the appropriate number of exercises, and rotation of exercise scenarios among hazardous material facilities over a five year period, to ensure demonstration of responder proficiency.
 - Invitation of offsite responding agencies and national assets, (e.g., Centers for Disease Control, Department of Agriculture) every three years.
 - Severe event scenarios every five years.
 - Test of design control and/or mitigation features in multiple facilities.
 - Demonstration of ERO capability.
 - Integration with local, State and Federal agencies.
- Develop challenging exercises based on scenarios identified in the Technical Planning Basis that:
 - Involve high-consequence scenarios.
 - Involve multiple response elements.
 - Result in offsite effects.

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- In order to test and demonstrate the site integrated emergency response capability, conduct the annual site-level exercise as a full-scale exercise involving site-level emergency response organization elements and resources. Invite some offsite response organizations to participate in a full-scale or full participation exercise every 3 years. This exercise must:
 - Use a scenario from the spectrum of potential Operational Emergencies identified in EPHAs (rotated among facilities and type of incident and/or initiator).
 - Include demonstration of protective actions.
- Conduct a site-level exercise for a severe incident as postulated by the all-hazards planning basis no less than once every 5 years. This exercise must involve the:
 - Release of hazardous materials at more than one facility/activity.
 - Disruption to site infrastructure, such as power, telecommunications, or roadways, or the significant delay of mutual aid.
- EPHA facilities with facility-level EROs must evaluate facility-level emergency response capability and proficiency annually by initiating response to simulated, realistic emergency situations/conditions in a manner that, as nearly as possible, replicates an integrated emergency response to an actual event.
- DOE OST Host Sites. Refer to Appendix R.
- Performance Indicators. DOE sites must participate in a program of performance indicators.

5.15.2 Improvements. DOE sites must identify improvements that consist of corrective actions and lessons learned.

- Corrective Actions
 - Corrective actions are developed for findings identified during evaluations, assessments, drills, exercises, and actual emergencies.
 - A formal tracking system is used to track completion of corrective actions. This tracking system may be part of a site action tracking system.
 - A corrective action plan is developed for findings documenting corrective actions, due dates, and assignees within 45 calendar days of the assessment report or After Action Report.

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- Corrective action plans for findings from Federally-directed or external assessments are submitted for approval to the Field Element Manager or appropriate Federal Manager.
- Corrective action plans, are submitted upon request, for findings from contractor-initiated assessments to Field Element Manager or appropriate Federal Manager.
- Lessons Learned
 - A system is used for incorporating and tracking lessons learned from training, drills, actual responses, and the site wide lessons learned program.
 - Lessons learned are reviewed from emergency management program activities under DOE Order 210.2A, *DOE Corporate Operating Experience Program*.
 - Lessons learned and best practices from the Office of Enterprise Assessments annual lessons learned report are reviewed, which provides opportunities for improving DOE emergency management programs.

5.15.3 Emergency Readiness Assurance Plan

- DOE sites must develop an Emergency Readiness Assurance Plan (ERAP) using the format and content guidelines provided by the Program Secretarial Officer that was developed in coordination with the Associate Administrator, Office of Emergency Operations. The ERAP must:
 - Program status is highlighted, including significant changes in the emergency management program (e.g., all hazards planning basis, organizations, and exemptions).
 - A summary of the THIRA is included.
 - Evaluation results and the status (e.g., open/unresolved or closed) of associated corrective actions are documented.
 - The goals for the fiscal year that ended are identified and the degree to which those goals were accomplished.
 - The goals for the next fiscal year are identified.
 - Be submitted to the Field Element Manager or appropriate Federal Manager for approval.

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- The Field Element Manager or appropriate Federal Manager must prepare and submit a consolidated ERAP covering the sites under its supervision to the Program Secretarial Officer and Associate Administrator, Office of Emergency Operations by November 30 each year. In order to meet this date, DOE sites must submit for approval the ERAP to the Field Element Manager or appropriate Federal Manager by October 15 of each year unless another date is established between the Field Element Manager/appropriate Federal Manager and the site.

6.0 EMERGENCY MANAGEMENT SITE SPECIFIC PROGRAM

6.1 Plans and Terminology

6.1.1 Terminology used in plans, procedures, guidelines, and documents is consistent.

6.1.2 The following are controlled, maintained as scheduled, and accessible as needed:

- Site Emergency Plan
- Notifications of agencies affected by updates to the emergency plan or emergency implementing procedures
- Hazard and Consequence Assessment documentation, including Hazard Surveys and EPHAs
- Emergency Readiness Assurance Plan (ERAP)
- Emergency Action Plans
- Emergency Public Information Plan
- Surveillances and Inspection documentation
- Facility Emergency Packet documentation
- Public Warning Siren testing documentation
- Assessment documentation
- Documentation of Classified Emergencies
- Documentation of Operational Emergencies with EOC activation
- Corrective Action Plans

6.1.3 Perform the following regarding the *Site Emergency Plan*, FBP-EM-PL-00026/NWD-PORTS-22-8108/DUF₆-PLN-045:

- Review, at least annually, the Site Emergency Plan.

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- Update the plan as appropriate.

6.1.4 Revisions to Memoranda of Agreement (MOA) occur if a change in applicability is identified.

6.1.5 Any changes to the site's Emergency Management Program, Emergency Plan, or EIPs with offsite response organizations are reviewed annually or as needed.

6.1.6 All DOE contract deliverable documents are reviewed and approved by the approving authorities specified in the governing Emergency Management procedures before being submitted to the DOE.

6.2 Facilities and Equipment

6.2.1 The need for alternate Emergency Management Program facilities (e.g., EOC and JIC) are identified and communicated to the Site Project Director.

6.2.2 Emergency Management Program facilities are coordinated and developed in order to meet regulatory requirements.

6.2.3 Facilities (including alternate EOC and/or JIC as appropriate) and response equipment/personnel necessary for a response to an emergency event originating within the site's boundaries are available and maintained by the company or such facilities and equipment are available through a subcontract, Memorandum of Understanding, or Mutual Aid Agreement.

6.3 Off-Site Response Interfaces

6.3.1 Activation

- Protection of the public and environment is identified and discussed with Federal, State, and/or local authorities.
- A process exists for requesting support, as required, from Federal, state, and/or local response agencies/organizations responsible for augmenting site resources in response to an onsite emergency event.
- Offsite authorities are aware of the availability of assistance from DOE or National Nuclear Security Administration (NNSA) national assets (i.e., Radiological Assistance Program, Federal Radiological Monitoring and Assessment Center, NARAC, Aerial Measuring System, and Radiation Emergency Assistance Center/Training Site), and informed of the process for requesting the activation of applicable assets.

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6.3.2 Communication and Information Exchange

- Adequate methods of communication (e.g., telephone circuits and/or radio channels) and communication protocols are in place, identified, and operable between the site and the offsite agencies/organizations.
- A process exists to maintain effective communication capabilities between the site ERO and offsite officials, the Cognizant Field Element, and the DOE Head Quarters Emergency Management Team.
- A process exists for briefing offsite officials upon activation of their respective facilities.
- A process exists to provide offsite agencies responsible for emergency response and for the protection of workers, the public, and the environment with initial and ongoing information sufficient to perform their respective functions.
- A process exists to provide a timely, clear, accurate, and effective information exchange between the ERO and offsite personnel.
- Briefings or training is conducted to facilitate a mutual understanding of terminology (e.g., units) to ensure an effective information exchange between the site ERO and offsite emergency response organizations.
- A process exists to direct incoming offsite agency inquiries/concerns to the appropriate personnel for resolution.

6.3.3 Coordination and Integration

- A process exists to facilitate a mutual understanding of capabilities especially the command and control system, in support of an integrated and effective response.
- A process exists to promote an effective working relationship between the offsite officials and their ERO counterparts.
- A process exists to facilitate coordination and integration with offsite response agencies and organizations so they follow established, pre-arranged, and documented plans and protocols including responsibilities, authorities, coordination of response, notifications, facility activations, communications, EOC interfaces, public information activities, and logistic protocols (e.g., working space and site access).
- Provisions are in place for coordinating the release of information about an emergency to the public.

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6.3.4 Maintaining Interfaces

- A process exists to establish and maintain ongoing and effective interfaces with offsite political, technical, security (e.g., local law enforcement), public health, and emergency services officials.
- Organizations are identified which may be needed in a supporting role and/or needed for long-term support, and pre-designated offsite points of contact are documented, maintained, and available to the response organization.

NOTE

Through formal agreements, DOE supports offsite agencies under the “good neighbor” policy in areas of emergency assistance including fire, medical, and hazardous material releases (including field monitoring resources).

- Agreements exist to provide assistance to or to receive assistance from offsite organizations (e.g., hospitals, fire departments) and are documented in formal MOA which are listed in the emergency plan and maintained current through periodic reviews.

NOTE

A change in original signatories to a given MOA does not in itself require revision of that document. A change in applicability of content in a MOA, however, does require a revision to that document.

- Coordination is maintained with offsite response agencies and organizations through routinely scheduled meetings. At least annually (or as needed), offsite response organizations are invited to meet and review changes to any of the following:
 - PORTS Emergency Management Program
 - Site Emergency Plan
 - Emergency Plan Implementing Procedures
- A process exists to facilitate routine coordination and interfaces through training, drills, and “good neighbor” support to enable offsite services (e.g., fire and medical, law enforcement), as indicated in the documented agreements to be integrated with onsite resources.

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6.4 All-Hazards Planning Basis/Technical Planning Basis

NOTE

The assignment of a team to prepare and/or oversee the preparation of all facility safety management related documents is highly recommended. FBP-EM-PRO-00049, *Preparation/Maintenance of Emergency Management All-Hazards Planning Basis Documents*, provides the requirements for preparing, reviewing, approving, and maintaining the All-Hazards Survey, EPHA, EALs, and THIRA. The development and review of the All-Hazards Survey, EPHA, EALs, and THIRA must be integrated from the beginning with appropriate individuals including the Facility Manager, the personnel/organization responsible for the facility safety documentation, the site Fire Services Organization, the Emergency Management Manager, and the local DOE Review team (i.e., DOE Program Manager, Facility Representative, and Emergency Management SME).

For a new facility, completion of an All-Hazards Survey addendum identifies whether an EPHA is then needed for this new facility.

- 6.4.1** An All-Hazards Survey is developed for all DOE owned or managed facilities including those for which the DOE is the lessee or lessor.
- 6.4.2** An EPHA is developed for all facilities containing hazards identified in the All-Hazards Survey as requiring one.
- 6.4.3** The All-Hazards Survey, EPHA, EALs, and THIRA is developed with the assistance of Emergency Management in accordance with FBP-EM-PRO-00049.
- 6.4.4** Emergency Management is notified any time there is a change in:
 - The facility mission or activities
 - Chemical Inventories including the introduction of new chemicals into the facility
- 6.4.5** All-Hazards Survey, EPHA, EALs, and THIRA documents are reviewed and revised whenever operations warrant a change (or every three years, whichever occurs first).

6.5 Readiness Assurance

- 6.5.1** An effective and formal readiness assurance program is implemented for the Emergency Management Program consisting of evaluation and improvement programs, and the results of reviews are documented based on emergency planning and preparedness activities and the results of the readiness assurance program.

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6.5.2 An annual schedule of inspections, surveillances, and assessments is developed to evaluate the elements of Emergency Management as listed in DOE O 151.1D.

6.5.3 The annual assessment schedule is provided to Contractor Assurance for inclusion in the Integrated Site Assessment Plan and is tracked until completion in the Commitment Management Database.

6.5.4 The Emergency Management staff is assigned to complete inspections, surveillances, and assessments.

6.5.5 Evaluation Program

- The evaluation program determines whether the emergency plans, implementing procedures, and resources are adequate and sufficiently maintained, exercised, and evaluated.
- Evaluations are based on a consistent set of performance-based evaluation criteria.
- Self-evaluations of the Emergency Management Program are conducted annually, findings are identified in program and exercise evaluations, and records are maintained of readiness assurance, self-evaluations, and related findings.
- External evaluations are coordinated with all involved organizations to minimize impacts and maximize benefits, personnel responsible for developing or maintaining the Emergency Management Program and associated program documentation are made available during external evaluations, findings are identified in all external program and exercise evaluations, and findings from these external program and exercise evaluations are acknowledged within 30 working days of receipt of the final evaluation report.
- Formal evaluation reports document evaluation results and findings.
- Performance indicators capture and track objective data regarding the performance of the Emergency Management Program in key functional areas and the results are shared with the cognizant field element and Associate Administrator, Office of Emergency Operations.

6.5.6 Improvement Program

- An improvement program ensures that appropriate and timely improvements are made to the Emergency Management Program in key functional areas and the results are shared with the cognizant field element and the Associate Administrator, Office of Emergency Operations.

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- Corrective actions for findings associated with all evaluations are implemented in order to achieve continuous improvement in the Emergency Management Program.
- All findings from external evaluations are included in a corresponding corrective action plan.
- Corrective action plans are originated within 30 working days of receipt of a final evaluation report.
- Corrective action plans are completed as soon as possible.
 - Corrective action plans associated with procedures and training are completed before the next annual self-assessment, if possible.
- Corrective action plans are subject to a verification and validation process which is independent of the person performing the corrective actions.
- Closure of findings from all evaluations is validated by the evaluating organization.
- Corrective action plans are prepared in accordance with FBP-QP-PRO-00020, *Problem Reporting and Issues Management*.
- A system for incorporating and tracking Lessons Learned from training, drills, and actual responses is maintained.
- Lessons Learned are processed in compliance with FBP-QP-PRO-00004, *Processing Operating Experience and Lessons Learned*.
- Lessons Learned received from external sources are reviewed for applicability and incorporated in the Emergency Management Program as appropriate.

6.5.7 Regulatory inspectors and auditors are provided assistance in the conduct of external inspections and audits.

6.5.8 Emergency Readiness Assurance Plan (ERAP)

NOTE

This section applies to DOE contractors only.

- The development of the Joint DOE Contractor ERAP for the site is initiated annually ensuring all DOE contractor activities for the site are included.

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- Significant changes in Emergency Management Programs and comparison of previous ERAP goals, milestones, and objectives to achievements are discussed.
- The ERAP identifies program goals for the fiscal year covered by the ERAP, the degree to which these goals were accomplished, and the goals for the next fiscal year.
- Evaluation results and the status of associated corrective actions, facility/site and activity self-assessments, and performance measures are documented.
- A summary of the results of the Site Threat and Hazard Identification and Risk Assessment are included.
- A sufficient level of information and analysis to afford management with an adequate tool for gauging Emergency Management Program readiness is provided.
- The completed ERAP is submitted to the DOE – Portsmouth Paducah Project Office per the identified schedule.
- A copy of the ERAP report is submitted to FBP Records Management and Document Control (RMDC) for retention.
- The completed and approved ERAP is submitted to the DOE Field Element Manager for DOE approval by October 15 of each year.

6.6 Spill Prevention, Control, and Countermeasures

- 6.6.1** FBP-EP-PL-00004, *Spill Prevention, Control, and Countermeasure Plan*, guides DOE personnel and DOE contractor personnel on the proper steps to take to avoid and respond to discharges of oil and oil products into the environment from containers of such products associated with DOE projects and activities.
- 6.6.2** FBP provides emergency response personnel, spill cleanup equipment, communications systems, and external agency coordination.
- 6.6.3** The FBP Emergency Management Manager is responsible for and accountable to DOE for ensuring the EOS is in a constant state of readiness and prepared for responses to discharges of oil and oil-related products.
- 6.6.4** Additionally, the PSS becomes the IC and provides continuous emergency direction, directs the effort to respond to the incident, and determines whether outside agencies require notification.

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6.7 RCRA Contingency Plan

6.7.1 FBP-EP-PL-00003, *Resource Conservation and Recovery Act Part B Permit Application Section G – Contingency Plan for the Portsmouth Gaseous Diffusion Plant Piketon, Ohio*, is a stand-alone document which amends the site Emergency Plan as allowed for in the Ohio Revised Code. The Emergency Plan integrates the plant’s planning processes into a single document designed to mitigate the consequences of an emergency; however, this Plan stands alone for response to hazardous waste incidents.

6.7.2 This RCRA Hazardous Waste Contingency Plan provides for the following elements related to emergency planning and emergency response:

- Designation and responsibilities of emergency coordinators
- Assessment methods and control actions in the event an emergency occurs
- Location, description, and capabilities of emergency equipment
- Details of evacuation plans
- Agreements between FBP-BWXT and local authorities and medical facilities for providing emergency response, medical treatment, and fire protection

6.7.3 A hazardous waste incident could result in an OE and potentially lead to a classified emergency.

6.7.4 The FBP Emergency Management Manager is responsible for and accountable to DOE for ensuring the EOS is in a constant state of readiness and prepared for responses to hazardous waste incidents.

7.0 DEFINITIONS/ACRONYMS

7.1 Definitions

- A. Acute Exposure Guideline Levels (AEGL) –** A guide defined by the US EPA represent threshold exposure limits for the general public that are applicable to emergency exposure periods ranging from 10 minutes to 8 hours. The recommended exposure levels are applicable to the general population including infants and children, and other individuals who may be susceptible. Three AEGLs have been defined: AEGL-1, AEGL-2, and AEGL-3; and are distinguished by varying degrees of severity of toxic events. The EALs discussed herein rely upon AEGL-2 and AEGL-3 concentrations.
- B. After Action Report –** A report prepared following an exercise or actual event or incident, to document the results of the evaluation to include findings, deficiencies, and opportunities for improvement.

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- C. Alert** – A condition in which an actual or potential substantial degradation in the level of control over hazardous material exists with a PAC-2 concentration (or radiological PAC dose) at or beyond a distance of 30 m from the source but less than 100 m from the source. An Alert involves emergency situations that could have direct effect on health and safety of facility workers. The declaration of an Alert requires the activation of the Field ERO and the EOC. The JIC is not normally required to be activated for an Alert
- D. Annual (such as “annual exercise”)** – At the discretion of the site/facility/activity Emergency Management Manager, and as specified in the emergency management plan, the term “annual” may be defined in terms of one of the following:
- Occurring or recurring once in each calendar year (i.e., between January 1 and December 31 of each year).
 - Occurring or recurring once in each fiscal year (i.e., between October 1 of the first year, and September 30 of the following year).
 - Occurring or recurring once within a specified, one year time period.
- E. Assessment** – A review, evaluation, inspection, test, surveillance, or audit to determine and document whether items, processes, systems, or services meet specified requirements and perform effectively.
- F. Categorization** – The process of identifying whether or not an abnormal event is an Operational Emergency.
- G. Classified Emergency** – An emergency level defined by emergency actions that differentiate the degree of severity, depending on the actual or potential consequence of the emergency. The classified emergency classifications are Alert, SAE, and GE.
- H. Compliance** – Conforming to the requirements of DOE O 151.1D, *Comprehensive Emergency Management System* (and, referenced, federal laws and regulations).
- I. Common Operating Picture (COP)** – An overview of an incident that provides consistent incident information, to be used by the Incident Commander/Unified Command and any supporting agencies and organizations.
- J. Continuity of Operations (COOP)** – An effort within individual organizations to ensure that Essential Functions continue to be performed during continuity events, regardless of size of impact.
- K. Deficiency** – An inadequacy in the implementation of an applicable requirement or performance standard that is found during an appraisal. Deficiencies may serve as the basis for one or more findings.

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- L. **Drill** – A coordinated, supervised activity usually employed to train personnel on a specific operation or function. Drills are commonly used to provide training on new equipment, develop or validate new policies or procedures, or practice and maintain current skills.
- M. **Emergency** – Any incident, whether natural or manmade, that could endanger or adversely affect people, property, or the environment, and that requires responsive action beyond normal operations. An “Operational Emergency” is a term used to categorize a specific type of emergency.
- N. **Emergency Action Level (EAL)** – Specific, predetermined, and observable criteria used to detect, recognize, and determine the emergency class of operational emergencies. EALs associated with radiological or nonradioactive hazardous materials releases are based upon Protective Action Criteria.
- O. **Emergency Operations Center (EOC)** – The physical or identified location at which the coordination of information and resources to support incident management activities normally takes place. An EOC may be a temporary facility, may be located in a more central or permanently established facility, or may be virtual.
- P. **Emergency Operations System** – A means of providing centralized collection, validation, analysis and coordination of information related to an emergency. The Emergency Operations System supports on-scene response during an escalating incident.
- Q. **Emergency Plan** – A document which clearly describes the site Emergency Management Program.
- R. **Emergency Plan Implementing Procedures (EPIP)** – Documents which are used to implement the various components of the site emergency plan.
- S. **Emergency Planning Hazards Assessment (EPHA)** – A quantitative analysis identifying hazards and the potential consequences from unplanned releases of (or loss of control over) hazardous materials, using accepted assessment techniques.
- T. **Emergency Planning Zone (EPZ)** – A zone identified to facilitate a pre-planned strategy for protective actions during a defined emergency.
- U. **Emergency Readiness Assurance Plan (ERAP)** – A documented annual assessment of the development, implementation, and maintenance of an Emergency Management Program. The ERAP is also a planning tool to identify and develop needed resources and improvements. An ERAP highlights significant changes in emergency management programs (i.e., planning basis, organizations, and exemptions) and compares actual achievements to goals, milestones and objectives.
- V. **Emergency Response Organization (ERO)** – A structured organization with overall identified responsibilities for initial and ongoing emergency response and mitigation.

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- W. Evacuation** – The directed relocation of a population out of a high risk area prior to or during an emergency. The evacuation of a site may be necessary when a hazard, be it natural or manmade, threatens the safety of those within the site.
- X. Event** – A scheduled nonemergency activity (e.g., weather event, demonstration, change in normal operations, etc.). The Incident Command System can be used as the management system for a wide range of events, e.g., parades, concerts, or sporting events.
- Y. Exercise** – An exercise is a scripted, scenario-based instrument to assess, evaluate and improve performance in prevention, protection, mitigation, response, and recovery capabilities in a risk-free environment. Exercises can be used for testing and validating policies, plans, procedures, training, equipment, and interagency agreements; clarifying and training personnel in roles and responsibilities; improving interagency coordination and communications; improving individual performance; identifying gaps in resources; and identifying opportunities for improvement. An exercise can be discussion-based (examples include seminars, workshops, tabletop exercise, and games), or operations-based.
- Z. Findings** – Findings are deficiencies that warrant a high level of attention on the part of management. If left uncorrected, findings could adversely affect the DOE mission, the environment, worker safety or health, the public or national security. Findings define the specific nature of the deficiency, whether it is localized or indicative of a systemic problem, and identify which organization is responsible for corrective actions.
- AA. Full Participation Exercise (FPE)** – Exercises similar to a Full-Scale Exercise except that offsite elements have agreed to participate in the full-scale exercise. Participation may include local and state response agencies or operations centers, Headquarters, local hospitals, Department of Defense partners, and other designated offsite partners. The FPE is designed to test the interface with offsite mutual-aid partners and other organizations that supplement or support response efforts.
- BB. Full-scale Exercise (FSE)** – The most complex and resource-intensive type of exercise. These exercises involve multiple agencies, organizations, and jurisdictions and validate many facets of preparedness. FSEs often include many players operating under cooperative systems such as the Incident Command System (ICS) or Unified Command.
- CC. Functional Exercise (FE)** – A single or multi-agency activity designed to evaluate capabilities, multiple functions, sub-functions or independent groups of functions that are focused on exercising plans, policies, procedures and staff members involved in management, direction, and command and control functions. An FE is conducted in a realistic, real-time environment; however, movement of personnel and equipment is usually simulated.

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- DD. General Emergency (GE)** – A condition in which the radiation dose from any release of radioactive material or a concentration in air from any release of other hazardous material is expected to exceed the PAC-2 concentration (or radiological PAC dose) at or beyond the site boundary. The event affects facility workers, collocated workers, and the general public. The declaration of a GE requires the full activation of the Field ERO, the EOC, and the JIC, and the issuance of Protective Action Recommendations to the public.
- EE. Graded Approach** – The processes and procedures that incorporates a risk-based approach to assess and protect against the consequences of hazards (man-made and natural) that may have an adverse impact on national security or the environment or that may pose significant danger to the health and safety of DOE Federal and contractor employees or the public.
- FF. Hazard Control** – Measures to eliminate, limit, or mitigate hazards to workers, the public, or the environment, including (1) physical, design, structural, and engineering features; (2) safety structures, systems, and components; (3) safety management programs; (4) technical safety requirements; and (5) other controls necessary to provide adequate protection from hazards.
- GG. Hazardous Material** – Any hazardous biological agents and toxins; any radioactive or radiological material that emits ionizing radiation or solid, liquid, or gaseous material that is toxic, explosive, flammable, corrosive, that emits ionizing radiation; or otherwise could adversely affect the health and safety of the public or the workers or harm the environment.
- HH. Improvement Item** – An identified situation in which the performance of an evaluated organization could be improved or made more efficient if it were to adopt standard DOE/National Nuclear Security Administration (NNSA) or industry best practices. The specific criteria relating to the improvement item are being met and the performance objective for the particular program element associated with the improvement item is being achieved.
- II. Incident** – An unexpected occurrence, natural or manmade, that requires a response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wildland and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes/tropical storms, tornadoes, tsunamis, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response. In contrast to an “event” as defined in the National Incident Management System, an “incident” is an unplanned occurrence.
- JJ. Incident Commander (IC)** – The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident scene.

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- KK. Incident Command System (ICS)** – Standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is to organize field-level incident management operations.
- LL. Joint Information Center (JIC)** – A working location, where multiple jurisdictions gather, process, and disseminate public information during an emergency.
- MM. National Incident Management System (NIMS)** – System mandated by Homeland Security Presidential Directive (HSPD)-5 that provides a consistent nationwide approach for Federal, State, local, and Tribal governments; the private sector; and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among Federal, State, local, and Tribal capabilities, the NIMS includes a core set of concepts, principles, and terminology. HSPD-5 identifies these as the Incident Command System; multiagency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking, and reporting of incident information and incident resources.
- NN. New Facility** – A structure (e.g., building, trailer, tent or tank) that is constructed or brought onto the site or turned over from ACP to DOE and which has not yet had an initial Hazards Survey completed.
- OO. On-Scene Commander or Commanders** – In the event that two or more emergencies occur simultaneously so they cannot be managed effectively as a single incident scene, the On-duty PSS/IC may designate multiple On-Scene Commanders and divide response resources as necessary to maintain command and control. An On-Scene Commander will be designated by the On-duty PSS when an immediate response by the PSS/IC is not achievable due to minimum staffing requirements in the X-300 PCF. The Fire Services Shift Commanders are the primary On-Scene Commanders. However, a security event is an example of when the PSS/IC may designate the On-Scene Commander role to the Pro-Force Shift Commander.
- PP. Operational Emergency** – A major unplanned or abnormal event or condition that involves or affects DOE/NNSA facilities and activities by causing or having the potential to cause serious health and safety or environmental impacts; requires resources from outside the immediate/affected area or local event scene to supplement the initial response; and, requires time-urgent notifications to initiate response activities at locations beyond the local event scene. This includes any accident/incident involving an offsite DOE shipment containing hazardous materials that causes the initial responders to initiate protective actions at locations beyond the immediate/affected area.

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- QQ. Opportunity for Improvement** – Suggestions offered in Independent Oversight appraisal reports that may assist cognizant managers in improving programs and operations. While they may identify potential solutions to findings and deficiencies identified in appraisal reports, they may also address other conditions observed during the appraisal process. Opportunities for improvement are provided only as recommendations for line management consideration; they do not require formal resolution by management through a corrective action process.
- RR. Proficiency** – Demonstrated skill and competency acquired from training and experience.
- SS. Protective Actions** – Physical measures (e.g., evacuation or sheltering) taken to prevent potential health hazards, resulting from a radiological event or a release of hazardous materials to the environment, from adversely affecting employees or the off-site population.
- TT. Protective Action Criteria (PAC)** – The level of hazardous material impact that, if observed or predicted, indicates action is needed to prevent or limit exposure of people to the hazard. PAC are used for both radiological and non-radiological consequence criteria in DOE facility emergency planning and response, e.g. building collapse zone, bomb threat.
- UU. Protective Action Recommendation** – Predetermined actions designed to protect the health and safety of the public that are consequence-based decisions (known as protective actions for the site). DOE sites recommend protective actions to the public and community for Operational Emergencies that have the potential to cause off-site consequences. Protective action recommendations are made promptly to off-site agencies in order to minimize emergency-related consequences.
- VV. Public Information Advisor** – An EOC cadre position who interfaces with the JIC cadre. The individual responsible for developing news releases, talking points, and informational messages released to the plant population.
- WW. Public Information Officer** – A cadre position at JIC.
- XX. Recovery** – The phase of activity that follows termination of an emergency. The recovery period begins when emergency response is declared terminated, but recovery planning can proceed before the response is declared terminated. The recovery phase continues until the objectives of the recovery effort have been met.
- YY. Reentry** – The prioritized actions required to return processes and support functions to operational stability following an interruption or emergency.

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ZZ. Site Area Emergency (SAE) – A condition in which the radiation dose from any release of radioactive material, or concentration in air from release of other hazardous material, is expected to exceed the PAC-2 concentration (or radiological PAC dose) at or beyond a distance of 100 m from the source but less than the site boundary. The event affects facility workers and collocated workers. The declaration of an SAE requires the activation of the Field ERO and the EOC. JIC is not activated.

AAA. Spokesperson – A cadre position at JIC. The individual responsible for communicating with the public, media, and/or coordinating with other agencies, as necessary, with incident related information requirements. The Spokesperson who is designated as the Lead depends on the location of the on-site emergency, the Spokesperson Lead.

7.2 Acronyms

- A. ACO** – American Centrifuge Operating, LLC
- B. AEOC** – Alternate Emergency Operations Center
- C. CM** – Crisis Manager
- D. CRD** – Contractor Requirements Document
- E. D&D** – Decontamination and Decommissioning
- F. DOE** – Department of Energy
- G. DOE O** – Department of Energy Order
- H. DOT** – Department of Transportation
- I. DUF₆** – Depleted Uranium Hexafluoride
- J. EAP** – Emergency Action Plan
- K. EPA** – Environmental Protection Agency
- L. EPZ** – Emergency Planning Zone
- M. ERG** – Emergency Relocation Group
- N. ERPG** – Emergency Response Planning Guidelines
- O. ESH&Q** – Environment, Safety, Health, and Quality
- P. FBP** – Fluor-BWXT Portsmouth LLC
- Q. LED** – Local Emergency Director

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- R. MOA** – Memoranda of Agreement
- S. NARAC** – National Atmospheric Release Advisory Center
- T. NFPA** – National Fire Protection Association
- U. NNSA** – National Nuclear Security Administration
- V. NWD** – North Wind Dynamics LLC
- W. OSHA** – Occupational Safety and Health Administration
- X. PDD** – Program Description Document
- Y. PORTS** – Portsmouth Gaseous Diffusion Plant
- Z. PPE** – Personal Protective Equipment
- AA. PSS** – Plant Shift Superintendents
- BB. RCRA** – Resource Conservation and Recovery Act
- CC. SME** – Subject Matter Expert
- DD. SPCC** – Spill Prevention, Control, and Countermeasure
- EE. TEEL** – Temporary Emergency Exposure Limits
- FF. THIRA** – Threat and Hazard Identification and Risk Assessment
- GG. USQ** – Unreviewed Safety Question

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Appendix A
REGULATORY REQUIREMENTS FLOWDOWN

1. DOE Order 151.1D, *Comprehensive Emergency Management System*
2. 10 CFR Part 830, *Nuclear Safety Management*
3. 10 CFR Part 851, *Worker Safety and Health Program*
4. 29 CFR 1910.120 (q) (6) (v), *Hazardous Waste Operations and Emergency Response*
5. 29 CFR 1910.1450 (b), *Occupational Exposure to Hazardous Chemicals in Laboratories*

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Emergency Management procedures are reviewed and approved per procedure FBP-BS-PRO-00024, *Developing and Maintaining Performance Documents*. Emergency Management reviews procedures and documents. Additional procedure reviewers are selected based on the subject matter. Additional reviewers to consider: ESH&Q, Quality Assurance, Training, Shift Operations, Crisis Manager, Fire Services, Protective Forces, Radiation Protection, NWD Security, ISMS, NWD, DUF₆, and ACO. The Emergency Management Manager approves technical and administrative procedures assigned to Emergency Management. DOE is not required to approve Emergency Management procedures. Controlled copy Emergency Management procedures are distributed to Emergency Management for the primary Emergency Operations Center, alternate Emergency Operations Center, primary Joint Information Center, Shift Operations, and Monitoring Stations if applicable.

FBP-EM-PL-00001, *Portsmouth Gaseous Diffusion Plant (PORTS) Site Continuity of Operations Plan U.S. Department of Energy Portsmouth Gaseous Diffusion Plant Piketon, Ohio*. An annual review and revision (if needed) of the COOP plan must be documented and is performed by the Emergency Management Manager or designee. The plan is reviewed and signed by the FBP Emergency Management Manager, FBP Emergency Services Director, and by a representative of each of the site entities covered by this plan. The plan is signed and approved by the FBP Site Project Director. Other signatories may be added as deemed necessary. The approved and signed plan must be submitted for approval to the appropriate DOE Field Element Manager, or designee. An electronic copy of the final approved plan must be provided to the Field Element Manager or designee. Due to the nature of this document, distribution is limited to Emergency Management controlled copy holders but additional copies may be issued upon request.

FBP-EM-PL-00019, *Emergency Public Information Plan*. Reviewed and revised as necessary triennially by the Emergency Management Department. Additional reviewers to consider include: Public Affairs, NWD, and DUF₆ Representatives. The plan is approved by the FBP Emergency Management Manager. DOE is not required to approve this document. Controlled copy distribution is made to Emergency Management.

FBP-EM-PL-00026/NWD-PORTS-22-8108/DUF₆-PLN-045, *Site Emergency Plan*, this document is referred to as the “All-Hazards Emergency Management Plan” in DOE O 151.1D. This plan must be:

- (1) Reviewed and documented annually and updated, if appropriate, and approved no less than every three years;
- (2) Updated if there are significant changes to the program plan (i.e., changes to organization structure, Emergency Planning Zones, etc.); and
- (3) Submitted to the Field Element Manager or appropriate Federal Manager for approval.

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The plan is reviewed and signed by the FBP Emergency Management Manager, FBP Emergency Services Director, and by a representative of each of the site entities covered by this plan. The plan is then approved by the FBP Site Project Director. Other signatories may be added as deemed necessary.

The approved and signed plan must be submitted for approval to the appropriate DOE Field Element Manager or appropriate Federal manager.

FBP-EM-EPHA-00007, *Fluor-BWXT Portsmouth LLC Emergency Planning Hazards Assessment for the Decontamination & Decommissioning, Infrastructure Support Services, and Piketon DUF₆ Conversion Facilities at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio*. The EPHA is reviewed no less than every three years, and updated if appropriate, or prior to significant changes to the site or hazardous material inventories. For example, significant changes are those changes which would result in a positive Unreviewed Safety Question for nuclear facilities, as defined in 10 CFR Part 830, *Nuclear Safety Management*. Changes that result in a reduction of hazards with no adverse effect on safety or emergency preparedness and response may be included in the next scheduled review and update.

If the triennial review of the EPHA determines there are no updates required, a letter to the Field Element Manager or appropriate Federal Manager must be submitted to document the review and provide notification that an update is unnecessary.

The EPHA generation, maintenance and approval process is controlled by FBP-EM-PRO-000249. The approved EPHA is submitted for approval to the appropriate DOE Field Element Manager or appropriate Federal Manager. Due to the nature of this document, distribution is limited to Emergency Management controlled copy holders but additional copies may be issued upon request.

A consolidated/integrated EPZ for the site/facility/activity is prepared and submitted for approval to the Field Element Manager or appropriate Federal Manager whenever changes are made to the EPZ. This EPZ is contained within the Site EPHA.

During the interim three year revision cycle of the site All-Hazards Survey document, if limited changes are required to the EPHA by an All-Hazards Survey form for a facility or project, then an addendum EPHA document may be written in lieu of a full revision of the EPHA. An addendum EPHA is subjected to the same review and approval process as the EPHA itself. The chief advantage of an addendum EPHA is the review is focused solely on the revised material rather than re-opening the entire document up to a new review process in the middle of a three year cycle.

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FBP-EM-HS-00006, *Site All-Hazards Survey for the Decontamination & Decommissioning Infrastructure Support Services, and Piketon DUF₆ Conversion Project Facilities at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio.* Survey is updated every three years from the date of issuance, and when there are significant changes to site/facility/activity operations or to hazardous material inventories. For example, significant changes may include new hazardous materials operations, recognition of hazards not previously identified, and changes that would result in a positive Unreviewed Safety Question for nuclear facilities, as defined in 10 CFR Part 830, *Nuclear Facility Safety Management*. Changes that result in a reduction of hazards with no adverse effect on safety or emergency preparedness or response may be include in the next scheduled review and update.

The All-Hazards Survey generation, maintenance and approval process is controlled by FBP-EM-PRO-00049. The approved survey is submitted for approval to the appropriate DOE Field Element Manager or appropriate Federal Manager. Due to the nature of this document, distribution is limited to Emergency Management controlled copy holders but additional copies may be issued upon request.

FBP-EM-THIRA-00001, *Site Threat and Hazard Identification and Risk Assessment for the Decontamination & Decommissioning, Infrastructure Support Services, and Piketon Duf₆ Conversion Facilities at the Portsmouth Gaseous Diffusion Plant Piketon, Ohio.* The THIRA is conducted in conjunction with the Site All-Hazards Survey for the Decontamination & Decommissioning Infrastructure Services, and Piketon DUF₆ Conversion Project Facilities at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio. The THIRA is reviewed no less than every three years, and updated if appropriate.

The THIRA generation, maintenance and approval process is controlled by FBP-EM-PRO-00049. The approved THIRA is submitted for approval to DOE Field Element Manager or appropriate Federal Manager. Due to the nature of this document, distribution is limited to Emergency Management controlled copy holders but additional copies may be issued upon request.

Emergency Action Levels (EALs) are derived from FBP-EM-EPHA-00007 and are implemented by FBP-EM-PRO-00020, *Emergency Categorization and Classification*, and EM-GUIDE-005, *Portsmouth (PORTS) Emergency Classification Matrix*. FBP-EM-PRO-00020 and EM-GUIDE-005 are approved by the FBP Emergency Management Manager. Hazardous material with an existing EAL has sometimes been moved to another facility prior to the completion of the required FBP-EM-EPHA-00007 and FBP-EM-PRO-00020/EM-GUIDE-005 documentation. In those cases, in order to maintain response coverage for incidents which may involve that material, a Standing Order may be issued temporarily applying an existing EAL for that material to the new situation until such time as the documentation is revised to reflect the current situation. For a Standing Order EAL, reference FBP-EM-PRO-00049, *Preparation/Maintenance of Emergency Management All-Hazards Planning Basis Documents*. Standing Orders are not approved by DOE.

Mutual Aid Agreements are reviewed annually and revised every four years as needed. A change in signatory does not warrant a revision. Approved by DOE and the FBP Site Project Director. Mutual Aid Agreements are distributed to Emergency Management and the applicable off-site agency. Additional distribution may occur upon request.

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Appendix C
MEMORANDUM OF AGREEMENTS

Memorandum of Agreement Among the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Pike Health Services, Inc. DBA as Adena Pike Medical Center

Memorandum of Agreement Among the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Adena Health System DBA as Adena Regional Medical Center

Memorandum of Agreement Among the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Air Evac Lifeteam

Memorandum of Agreement Among the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Portsmouth Emergency Ambulance Services, Inc. (supplies Pike County EMS)

Memorandum of Agreement Between the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Pike County Firefighter’s Association

Memorandum of Agreement Among the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Pike County Fair Board

Memorandum of Agreement Among the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Scioto County Fair Board

Memorandum of Agreement Between the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Southern Ohio Medical Center

Memorandum of Understanding Between Department of Energy Portsmouth/Paducah Project Office and the Pike County Sheriff’s Office

Memorandum of Agreement Among The United States Department of Energy and Fluor-BWXT Portsmouth LLC and Scioto County Sheriff’s Office

Memorandum of Agreement Among the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Pike County Emergency Management Agency (HF Sampling)

Memorandum of Agreement Among the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Pike County Emergency Management Agency (JIC use)

Memorandum of Agreement Among the United States Department of Energy and Fluor-BWXT Portsmouth LLC and Pike County Firefighters Association (Emergency Assistance)

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Appendix D
ALL HAZARDS PLANNING BASIS/TECHNICAL PLANNING BASIS IMPLEMENTING DOCUMENTS

FBP-EM-EPHA-00007, Fluor-BWXT Portsmouth LLC Emergency Planning Hazards Assessment for the Decontamination & Decommissioning, Infrastructure Support Services, and Piketon DUF₆ Conversion Facilities at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio

FBP-EM-HS-00006, Site All-Hazards Survey for the Decontamination & Decommissioning Infrastructure Support Services, and Piketon DUF₆ Conversion Project Facilities at the Portsmouth Gaseous Diffusion Plant Piketon, Ohio

FBP-EM-PRO-00020, Emergency Categorization and Classification

FBP-EM-PRO-00049, Preparation/Maintenance of Emergency Management All-Hazards Planning Basis Documents

FBP-EM-THIRA-00001, Site Threat and Hazard Identification and Risk Assessment for the Decontamination & Decommissioning, Infrastructure Support Services, and Piketon Duf₆ Conversion Facilities at the Portsmouth Gaseous Diffusion Plant Piketon, Ohio

EM-GUIDE-005, Portsmouth (PORTS) Emergency Classification Matrix

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Appendix E
EMERGENCY RESPONSE ORGANIZATION IMPLEMENTING DOCUMENTS

FBP-EM-PRO-00001, *Dispatch of Monitoring Teams*

FBP-EM-PRO-00016, *Incident Command System*

FBP-EM-PRO-00017, *Activation of the Emergency Response Organization and Continuity Emergency Response Group*

FBP-EM-PRO-00018, *Joint Information Center (JIC) Concept of Operations*

FBP-EM-PRO-00019, *Emergency Operations Center Concept of Operations*

FBP-EM-PRO-00036, *Development, Maintenance and Inspection of Facility Emergency Packets and Emergency Action Plans*

FBP-EM-PRO-00066, *Concept of Operations for Alternate Emergency Operations Center (AEOC) and Alternate Joint Information Center (JIC)*

FBP-EM-PRO-00067, *Administration and use of Web EOC*

FBP-FP-PRO-00026, *Alarm Room Response*

FBP-FP-PRO-00102, *Development of Pre-Incident Plans*

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Appendix F
EMERGENCY OPERATIONS SYSTEM IMPLEMENTING DOCUMENTS

FBP-EM-PRO-00016, *Incident Command System*

FBP-EM-PRO-00018, *Joint Information Center (JIC) Concept of Operations*

FBP-EM-PRO-00019, *Emergency Operations Center Concept of Operations*

FBP-EM-PRO-00066, *Concept of Operations for Alternate Emergency Operations Center (AEOC) and Alternate Joint Information Center (JIC)*

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Appendix G
TRAINING AND DRILLS IMPLEMENTING DOCUMENTS

FBP-EM-PLN-001 Emergency Management Five-Year Drill and Exercise plan

FBP-EM-PLN-002, Emergency Response Organization (ERO) Position training requirements plan

FBP-EM-PRO-00015, *Emergency Management Training*

FBP-EM-PRO-00037, *Emergency Management Drill and Exercise Program*

General Employee Training PPPO 21221

Hazmat Technician Training (initial and refresher)

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Appendix H
EMERGENCY MEDICAL SUPPORT IMPLEMENTING DOCUMENTS

FBP-EM-POL-00001, *Mass Casualty Medical Response*

FBP-EM-PRO-00040, *Request for Helicopter Ambulance Service*

FBP-FS-PRO-00011, *Emergency Decontamination*

FBP-FS-PRO-00068, *Transportation of Ill or Injured Off-Site*

FBP-IH-PRO-00091, *Medical Radiological Decontamination*

FBP-RP-PRO-00016, *Personnel Skin/Clothing Decontamination*

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Appendix I
OFFSITE RESPONSE INTERFACES IMPLEMENTING DOCUMENTS

FBP-EM-PL-00019, *Emergency Public Information Plan*

FBP-EM-PRO-00013, *Notification for Classified Emergencies and Operational Emergencies, and Occupational Safety and Health Administration (OSHA) Reporting Requirements*

FBP-EM-PRO-00018, *Joint Information Center (JIC) Concept of Operations*

FBP-EM-PRO-00020, *Emergency Categorization and Classification*

FBP-EM-PRO-00037, *Emergency Management Drill and Exercise Program*

FBP-EM-PRO-00038, *Mutual Aid*

EM-GUIDE-005, *Portsmouth (PORTS) Emergency Classification Matrix*

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Appendix J
EMERGENCY CATEGORIZATION AND CLASSIFICATION IMPLEMENTING
DOCUMENTS

FBP-EM-PRO-00013, *Notification for Classified Emergencies and Operational Emergencies, and Occupational Safety and Health Administration (OSHA) Reporting Requirements*

FBP-EM-PRO-00016, *Incident Command System*

FBP-EM-PRO-00020, *Emergency Categorization and Classification*

EM-GUIDE-005, *Portsmouth (PORTS) Emergency Classification Matrix*

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Appendix K
PROTECTIVE ACTIONS IMPLEMENTING DOCUMENTS

FBP-EM-GUI-00003, *Protective Actions and Protective Action Recommendations*

FBP-EM-PRO-00010, *Accountability*

FBP-EM-PRO-00011, *Evacuation*

FBP-EM-PRO-00016, *Incident Command System*

FBP-EM-PRO-00020, *Emergency Categorization and Classification*

FBP-EM-PRO-00021, *Public Warning system Activation*

FBP-EM-PRO-00023, *Monitoring Station*

FBP-EM-PRO-00061, *Plant Shift Superintendent and Facility Manager Actions in Severe Weather Response*

EM-GUIDE-005, *Portsmouth (PORTS) Emergency Classification Matrix*

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Appendix L
CONSEQUENCE ASSESSMENT IMPLEMENTING DOCUMENTS

FBP-EM-PRO-00001, *Dispatch of Monitoring Teams*

FBP-EM-PRO-00004, *Computer Generation of ALOHA Plume Models*

FBP-EM-PRO-00055, *Computer Generation of HotSpot Plume Models*

FBP-EM-PRO-00056, *Performing Consequence Assessment Using the National Atmospheric Release Advisory Center (NARAC) Web-based Modeling Program*

FBP-EM-PRO-00060, *Computer Generation of Emergency Prediction Information Code (EPIcode) Plume Models*

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Appendix M
EMERGENCY FACILITIES AND EQUIPMENT/SYSTEMS IMPLEMENTING DOCUMENTS

FBP-EM-PRO-00018, *Joint Information Center (JIC) Concept of Operations*

FBP-EM-PRO-00019, *Emergency Operations Center Concept of Operations*

FBP-EM-PRO-00028, *Maintenance of Emergency Facilities and Equipment*

FBP-EM-PRO-00066, *Concept of Operations for Alternate Emergency Operations Center (AEOC) and Alternate Joint Information Center (JIC)*

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Appendix N
NOTIFICATIONS AND COMMUNICATIONS IMPLEMENTING DOCUMENTS

FBP-EM-PRO-00013, *Notification for Classified Emergencies, Operational Emergencies, and Occupational Safety and Health Administration (OSHA) Reporting Requirements*

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Appendix O
EMERGENCY PUBLIC INFORMATION IMPLEMENTING DOCUMENTS

FBP-EM-PL-00019, *Emergency Public Information Plan*

FBP-EM-PRO-00018, *Joint Information Center (JIC) Concept of Operations*

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Appendix P
TERMINATION AND RECOVERY IMPLEMENTING DOCUMENTS

FBP-EM-PRO-00012, *Termination and Recovery*

FBP-EM-PRO-00016, *Incident Command System*

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Appendix Q
READINESS ASSURANCE IMPLEMENTING DOCUMENTS

FBP-EM-PRO-00037, *Emergency Management Drill and Exercise Program*

FBP-QP-GUI-00003, *Contractor Assurance System Assessment Guide*

FBP-QP-PRO-00004, *Processing Operating Experience and Lessons Learned*

FBP-QP-PRO-00009, *Developing and Maintaining Assessment Plans and Schedules*

FBP-QP-PRO-00010, *Management Assessment*

FBP-QP-PRO-00011, *Independent Assessment*

FBP-QP-PRO-00020, *Problem Reporting and Issues Management*

FBP-QP-PRO-00023, *Surveillances*

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SECTIONS OF DOE ORDER 151.1D, NOT APPLICABLE TO FBP EMERGENCY
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FBP Emergency Management is not required to implement the following sections of DOE Order 151.1D.

1. Power Marketing Administration Emergency Management Program, Appendix B.
2. All Hazards Planning Basis, Attachment 3, Part 2.d. (3)
 - Associated Administrator, Office of Emergency Operations must prepare a DOE Enterprise Threat and Hazard Risk Profile that incorporates the sites and facilities submitted THIRAs.
3. All Hazards Planning Basis, Attachment 3, Part 2.e (4) (b)
 - These materials associated with a facility/activity being defined as an accelerator per DOE 0 420.2, *Safety of Accelerator Facilities*, current version, may be screened out if analysis indicates that all incidents would be classified as less than an alert.
4. All Hazards Planning Basis, Attachment 3, Part 2.e. (5) (a)
 - Identify hazardous biological agents and toxins including Federally regulated agents and toxins identified in lists published in Department of Health and Human Services regulations [42 CFR Part 73, *Select Agents and Toxins*] and Department of Agriculture regulations [7 CFR Part 331, *Possession, Use and Transfer of Select Agents and Toxins* and 9 CFR Part 121, *Possession, Use and Transfer of Select Agents and Toxins*].
5. All Hazards Planning Basis, Attachment 3, Part 2.e. (5) (b)
 - Analyze further in an EPHA if these materials are present if exceeding the minimum quantities specified to be federally regulated.
6. Emergency Categorization, Attachment 3, Part 8.b. (4)
 - Hazardous Biological Agent or Toxins. The following incidents or conditions involving the release of a hazardous biological agent or toxin [identified in 42 CFR Part 73, *Select Agents and Toxins*, and 9 CFR Part 1212, *Possession, Use and Transfer of Select Agents and Toxins*], represent major failure of safety systems, protocols, and/or practices with the potential to have a serious impact on health and safety of workers, collocated workers, emergency responders, members of the public, or the environment: Any actual or potential release of a hazardous biological agent or toxin outside of the secondary barriers of the biocontainment area.
7. All-Hazards Planning Basis/Technical Planning Basis, Attachment 4, Part 2.c.
 - Some facilities, such as underground facilities, require additional consideration of how airborne contaminants may be released, since an atmospheric dispersion model would not provide a valid result.
8. All-Hazards Planning Basis/Technical Planning Basis, Attachment 4, Part 2.d. (3) (c) 3
 - For hazardous biological agents and toxins identified in Attachment 3, protective actions are required for any actual or potential release of agents or toxins outside of secondary containment barriers.

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9. All-Hazards Planning Basis/Technical Planning Basis, Attachment 4, Part 2.r.
 - The office of Secure Transportation (OST) must develop an EPHA for its shipments to provide the all-hazards planning basis for the OST Emergency Program. See Attachment 5. Host sites must incorporate the OST EPHA into the site-level emergency management program.
10. Training and Drills, Attachment 3, Part 5.a (4)
 - Determine based upon the all hazards planning basis if additional training must be provided to workers to address response actions that may be necessary for severe events with regional impacts when the site/facility/activity may be isolated from offsite response assistance and infrastructure support. This training may consist of self-help strategies, such as first-aid, and the location of onsite medical and life sustaining supplies and procedures for all identified protective actions.
11. Training and Drills, Attachment 4, Part 5.d (1) through (5)
 - Each Defense Nuclear Facility must conduct drills, using a graded approach, involving the Operations staff, Emergency Management staff, onsite Incident Command staff, and EOC staff, In developing the Drills and Training program each Defense Nuclear facility must consider:
 - (1) Elements of the EOC staff for Operational Emergencies
 - (2) Drill scenarios that are representative of the hazards/threats identified in the all-hazards planning basis
 - (3) Annual drills integrating the ERO with conduct of operations drills as initiating events
 - (4) Evaluations of drill design and content, to include participants, for continuous improvement regardless of the scope or mechanism
 - (5) Rotation of shifts involved in the drill, and include unannounced drills, as well as drills during low staffing levels.
12. Emergency Classification, Attachment 4, Part 8.a. (3)
 - For hazardous biological materials and toxins identified in Attachment 3, PAC are considered exceeded and immediate protective actions are required for any actual or potential release of agents or toxins outside of secondary containment barriers. Long-term PAC are specified by State or local public health officials.
13. Emergency Classification, Attachment 4, Part 8.b. (1) (b)
 - An actual or potential substantial degradation in the level of safety or security of nuclear weapons, component, or test device at a fixed site/facility that would not pose an immediate threat to workers or the public.
14. Emergency Classification, Attachment 4, Part 8.b. (2) (b)
 - An actual or potential threat to the integrity of a nuclear weapon, component, or test device that may adversely impact the health and safety of workers in the immediate area, but no the public.
15. Emergency Classification, Attachment 4, Part 8.b. (3) (b)
 - Actual or likely catastrophic failures in safety or security systems threatening the integrity of a nuclear weapons, component, or test device that may adversely impact the health and safety of workers and the public.

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16. Emergency Facilities and Equipment/Systems, Attachment 4, Part 11.a. (4) and (5)
 - (4) Certify HEPA filters at an approved test facility, if occupants rely on HEPA filters for protection from airborne contaminants
 - (5) Ensure that the system removes the types of plausible contaminants, if occupants rely on a filtration system for habitability.

17. Emergency Facilities and Equipment/System, Attachment 4, Part 11.c. (1) through (4)
 - Incorporate the following criteria into the design, construction, and maintenance of new EOCs at DOE sites with Defense Nuclear Facilities.
 - (1) If the EOC is located within the EPZ, it must be able to remain habitable during radiological and hazardous material releases.
 - (2) In order to withstand natural phenomena incidents, the EOC must be designated as an Essential Facility in accordance with the International Building Code or state/regional/local equivalent building code (if approved by the Field Element Manager or appropriate Federal Manager per DOE Order 420.1C, Facility Safety) and meet the design requirements of the applicable building code.
 - (3) The EOC must be capable of sustaining emergency operations for a minimum of 72 hours during severe events when site or commercial infrastructure may be disrupted.
 - (4) Any new EOC design and construction project that has received Critical Decision 2 (CD-2) (Performance Baseline) approval per DOE O 413.3B Program and Project Management for the Acquisition of Capital Assets, as of the date of issuance of this Order, is exempt from the requirements of paragraph 11.c.

18. Emergency Facilities and Equipment/System, Attachment 4, Part 11.g. (1) and (2)
 - Defense Nuclear Facilities must identify onsite emergency response facilities (i.e., primary EOCs, control rooms, operation centers, medical facilities, fire departments). For these facilities, the DOE facility/site must:
 - (1) Develop compensatory measure for onsite emergency response facilities that are not survivable and habitable.
 - (2) Maintain and test safety functions and features to ensure they function as designed.

19. Emergency Facilities and Equipment/System, Attachment 4, Part 11.h. (1) and (2)
 - Defense Nuclear Facilities must:
 - (1) Develop safe shutdown or walkaway strategies for equipment and facilities during emergencies.
 - (2) Ensure a transition of responsibilities and required actions between normal work activities, incident activities, and recovery operations.

20. Readiness Assurance, Attachment 4, Part 15.f.
 - DOE OST Host Sites must conduct an exercise no less than once every 5 years that assesses and validates emergency response training related to the Host Site's ability to respond effectively to an OST emergency at the Host Site.

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21. Readiness Assurance, Attachment 4, Part 15.g.
 - DOE sites that do not have any Defense Nuclear Facilities may request participation of the Department's Radiological Emergency Response Assets. Requests for their participation must be made to the Director, Office of Nuclear Incident Response, no less than 6 months prior to the exercise.

22. Readiness Assurance, Attachment 4, Part 15.h.
 - DOE sites with a Defense Nuclear Facility or Facilities must conduct an exercise annually involving the Operation staff, Emergency Management staff, and Incident Command staff that includes:
 - (1) Elements of the EOC staff for Operation Emergencies
 - (2) Regardless of the scope or mechanism, evaluate Operations staff, Emergency Management staff, Incident Command staff, and EOC staff for continuous improvement.

23. Readiness Assurance, Attachment 4, Part 15.i.
 - DOE sites with a Defense Nuclear Facility or Facilities must conduct an exercise involving one or more of the Department's Radiological Emergency Response Assets no less than once every 3 years. Requests for participation of the Department's Radiological Emergency Response Assets must be made to the Director, Office of Nuclear Incident Response, no less than 6 months prior to the exercise.

24. Readiness Assurance, Attachment 4, Part 15.j. (1) through (4)
 - Defense Nuclear Facilities must perform the following:
 - (1) Conduct causal analysis to determine corrective actions for findings identified as a result of noncompliance for life safety.
 - (2) Develop formal corrective action plans for identified findings. The corrective action plan must be approved by the Field Element Manager. The Field Element Manager must ensure effective corrective actions are tracked, identified, and implemented.

25. Secure Transportation Program, Attachment 5

26. Energy Emergency Response Support, Attachment 6