U.S. Department of Energy
Washington, DC

ORDER

NE O 151.1

Approved:August-2025

SUBJECT: COMPREHENSIVE EMERGENCY MANAGEMENT SYSTEM

1. PURPOSE. To provide Office of Nuclear Energy (NE) policy for the development, management, and administration of the DOE Emergency Management System. This Order meets the requirements of Executive Orders, Policies, and Directives regarding emergency management, including Presidential Policy Directive 8 (PPD-8) and Homeland Security Presidential Directive 5 (HSPD-5), which mandates that the Department adopts the National Incident Management System, in support of the National Response Framework.

2. CANCELS/SUPERSEDES.

   This Order applies in lieu of DOE O 151.1E (current version) with respect to the facilities and activities covered by Section 3 below. Cancellation of a directive does not, by itself, modify or otherwise affect any contractual or regulatory obligation to comply with the directive. Contractor Requirements Documents (CRDs) that have been incorporated into a contract remain in effect throughout the term of the contract unless and until the contract or regulatory commitment is modified to either eliminate requirements that are no longer applicable or substitute a new set of requirements.

3. APPLICABILITY.

   a. Departmental Elements. This Order applies to all Departmental elements including NNSA, and their associated field element(s),[1] to the extent they are involved with facilities and activities described in paragraph 3.b.

   b. NE Facilities and Activities. Except as stated in paragraph 3.d., this Order applies to all facilities and activities under the responsibility of NE, including nuclear facilities and nuclear activities authorized by NE. Such nuclear activities include the design, construction, management, operation, decontamination, decommissioning, or demolition of nuclear facilities.

   c. Contractors. Except as stated in paragraph 3.d., this Order sets forth conditions to be applied to contractors performing work that involves facilities and activities described in paragraph 3.b. The CRD must be included in contracts under which the contractor is involved with such facilities and activities.

   d. Equivalencies and Exemptions

[1] Operations offices, service centers, site offices, area offices, field offices, government-owned government-operated facilities, and regional offices of federally-staffed laboratories that report directly to a DOE Headquarters office.

1) Exemption. In accordance with the responsibilities and authorities assigned by Executive Order 12344, codified at 50 United States Code (U.S.C.) sections 2406 and 2511 and to ensure consistency through the joint Navy/DOE Naval Nuclear Propulsion Program, the Deputy Administrator for Naval Reactors (Director) will implement and oversee requirements and practices pertaining to this Directive for activities under the Director's cognizance, as deemed appropriate.

2) Exemption. This Order does not apply to activities regulated by either the Nuclear Regulatory Commission (NRC) or the authorities of a State under an agreement with the NRC per the Atomic Energy Act of 1954, as amended (AEA).

3) Other Equivalencies/Exemptions. Any other equivalency or exemption to this Order requires the approval of NE's Safety Basis Approval Authority (SBAA). Requests for equivalencies/exemptions will be adjudicated by NE's SBAA within 14 calendar days of receipt of a substantially complete request.

4. REQUIREMENTS.

a. General. Each DOE laboratory, plant, and site must establish and maintain a documented emergency management program that implements the requirements of this Order along with applicable federal, state, and local laws, regulations, and ordinances for fundamental worker safety programs.

b. Attachment 1, Contractor Requirements Document (CRD). The CRD outlines contractor requirements necessary to execute responsibilities outlined in this Order.

c. Attachment 2, Emergency Management Program. Provides requirements associated with NE O 151.1 and requirements applicable to contracts in which the associated CRD (NE O 151.1, Attachment 1) is inserted.

5. RESPONSIBILITIES.

a. DEPUTY SECRETARY, DEPARTMENT OF ENERGY. Serves as the senior Departmental emergency management official. In consultation with the Secretary, issues emergency management policy, requirements, and directives; and designates or delegates responsibility and authority, as appropriate. Administers, activates, convenes, and chairs the Emergency and Incident Management Council (EIMC). Appoints the EIMC Secretariat and establishes and maintains charters.

b. OFFICE OF NUCLEAR ENERGY FIELD ELEMENT MANAGER OR SAFETY BASIS APPROVAL AUTHORITY (FEM/SBAA).

1) May delegate approval responsibilities, after initial approval, for individual requirements, in accordance with Contractor Assurance Systems with appropriate oversight. Delegations must be formally documented.

2) Implements emergency management policy and requirements and maintains programs and systems consistent with this Order.

3) Reviews laboratory, plant, and site emergency management plans, including updates.

4) Reviews laboratory, plant, and site All -Hazards Surveys.

5) Reviews laboratory, plant, and site EPHAs.

6) Reviews laboratory, plant, and site -level consolidated and integrated Emergency Planning Zones.

7) Works with contracting officers to ensure laboratory, plant, and site performance measures for the emergency management program are incorporated into contractual agreements.

8) Reviews laboratory, plant, and site self -assessment reports.

9) Reviews the annual laboratory, plant, and site exercise plan.

10) Reviews laboratory, plant, and site corrective action plans for external issues identified during assessments, exercises, real -world incidents, and equipment maintenance and testing.

11) Ensures emergency public information planning is integrated with laboratory, plant, and site emergency management plans.

12) Where applicable, pre-designates a DOE employee as the initial on -scene coordinator for Federal responses under 40 Code of Federal Regulations (CFR) Part 300, *National Oil and Hazardous Substances Pollution Contingency Plan* or its replacement.

13) Participates in the development and implementation of mutual assistance agreements, to which the Field Element is a signatory, with state, tribal, and local authorities.

14) Identifies a Prime Contractor Senior Official with decision -making authority and responsibilities to serve as an emergency manager, supported by personnel with communications, technical, and public affairs expertise.

15) Where applicable, assigns a Senior Federal Official to the EOC in the capacity as the FEM/SBAA, with decision -making authority and responsibilities including but not limited to emergency event response, termination, and recover.

16) Ensures that the Office of Nuclear Energy is kept informed about matters that affect their responsibilities.

c. CONTRACTING OFFICER. Ensures that the CRD is incorporated into the laboratory, plant, and site management contract in accordance with the laws, regulations, and DOE directives clause, through negotiation or modification, as appropriate.

6. REFERENCES. See Attachment 3.

7. DEFINITIONS. See Attachment 4.

8. CONTACT. For assistance regarding this Order, contact the Office of Nuclear Energy

BY ORDER OF THE SECRETARY OF ENERGY:

JAMES P. DANLY
Deputy Secretary

ATTACHMENT 1
CONTRACTOR REQUIREMENTS DOCUMENT (CRD)
NE O 151.1, *COMPREHENSIVE EMERGENCY MANAGEMENT SYSTEM*

Regardless of the performer of the work, the contractor is responsible for complying with the requirements of this CRD. 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, local, and tribal laws, regulations, and ordinances for fundamental worker safety programs.

In addition to the requirements set forth in this CRD, contractors are responsible for complying with Attachment 2 to Office of Nuclear Energy (NE) O 151.1, which provides program requirements 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.

Contractors may meet, with prior approval through the formal equivalency and exemption process, the requirements of this Order by implementing nationally recognized standards or host institutions applicable standards. See Section 3.d., Equivalencies and Exemptions of this Order.

ATTACHMENT 2
EMERGENCY MANAGEMENT PROGRAM

Each laboratory, plant, and site must establish and maintain an emergency management program that complies with the requirements in this attachment.

1. PROGRAM ADMINISTRATION AND MANAGEMENT. DOE federal and contractor managers responsible for DOE laboratories, plants, and sites must:

   a. Designate an individual to administer the emergency management program. This individual must:

      1) Be responsible for and have authority for day-to-day operation and maintenance of the emergency management program.

      2) Have access to management personnel who have authority for laboratory, plant, and site-level resources and operations.

      3) Integrate emergency management planning with other applicable programs and associated documents, and any other programs or documents identified by the Field Element Manager/Field Office Manager (FEM/FOM).

      4) Approve or concur on planning documents addressing the program elements in this attachment.

   b. Analyze capabilities that would stress the laboratory, plant, or site's capabilities to plan for, respond to, and recover from the hazards identified in the All-Hazards Planning Basis; and use the analysis in the development of the emergency management plan.

   c. Develop and maintain an all-hazards emergency management plan that is based on the All-Hazards Planning Basis. The emergency management plan, including subsequent revisions must be submitted to the FEM/SBAA.

2. ALL-HAZARDS PLANNING BASIS. The All-Hazards Planning Basis includes an All-Hazards Survey, an Emergency Planning Hazards Assessment (EPHA), (when applicable), and the development of Emergency Action Levels (EALs), protective actions, and Emergency Planning Zones (EPZs). The results of the EPHA determine if a laboratory, plant, or site is included as a Hazardous Materials Program and are used to develop the EALs, protective actions, and EPZ. The All-Hazards Planning Basis must be shared with the laboratory, plant, or site security program.

   a. All-Hazards Survey. An All-Hazards Survey must be performed. Its purpose is to identify all threats and hazards that may impact workers or public health and safety, the environment, or the operation of that laboratory, plant, or site; and establish the planning basis for the emergency management program. Each All-Hazards Survey must:

      1) Address the following three types of hazards:

         a) Natural hazards, which result from acts of nature, such as tornadoes, hurricanes, earthquakes, wildland fires, droughts, floods or excessive precipitation, animal disease outbreak, epidemics, or pandemics.

         b) Technological hazards, which result from accidents or the failures of systems

and structures, such as hazardous materials releases or dam failures.

c) Human-caused hazards, which result from an intentional or unintentional action taken by persons or an adversary.

2) Describe the applicable health, safety, and environmental impacts of the potential hazards.

3) Be periodically reviewed and if appropriate, updated before there are significant changes to laboratory, plant, or site operations or hazardous materials.

4) Hazardous Materials Screening Process. All hazardous materials at a DOE laboratory, plant, or site must be considered in the screening process to identify specific hazardous materials and quantities that, if released, could produce impacts consistent with the definition of an Operational Emergency (OE). Hazardous materials must be screened as follows:

a) Each hazardous material container and associated hazardous process must be evaluated separately, unless one of the following conditions exists, in which case the total quantity of the hazardous material must be used.

(1) Container is interconnected with other containers, or

(2) Multiple containers are located within a facility such that a credible incident could result in release of the contents of multiple containers.

b) The capacity of the container must be used when the quantity of the hazardous material in the container is unknown.

c) Materials can be excluded from the screening process if they meet one of the following criteria:

(1) Materials used in the same form, quantity, and concentration as a product packaged for distribution and use by the public (for example, consumer products for household use).

(2) Materials that, because of their physical form or other factors, do not present an airborne exposure hazard. This includes solid materials in a form with particle size >10 microns and solid materials with no credible release scenario to reduce the material to particles <10 microns; liquids with a vapor (partial) pressure of <10 mmHg at 25^{o}C; and aqueous solutions where the hazardous component is a non-volatile solute.

(3) Ordinary product of combustion when associated with a scenario involving a combustion incident.

(4) Explosives, regardless of the facility designation, provided the explosives are also screened through 2.a.4) d) (4) of this Attachment.

(5) Simple asphyxiants and cryogenic materials if the material cannot impact workers, visitors, or the public.

(6) Chemical waste in concentrations below one percent by weight of the mixture, as defined in 40 CFR 68, *Chemical Accident Prevention,* and chemically neutralized chemical waste.

(7) Sealed radioactive sources that are engineered to pass the special form testing specified by Department of Transportation (DOT) or the American National Standards Institute (ANSI) and radiological materials stored in DOT Type B shipping containers with overpack if the Certificates of Compliance are current, the materials stored are authorized by the Certificate, and the conditions are covered under 10 CFR Part 71, *Packaging and Transportation of Radioactive Material*.

(8) Materials that have a Health Hazard rating of 0, 1, or 2 based on NFPA 704.

d) Materials with a GHS Acute Toxicity Hazard Category of 3, 4, or 5. If multiple GHS Acute Toxicity routes of exposure (inhalation, oral, or dermal) are available for a material, the Temporary Emergency Exposure Limits (TEEL) HBK-1046-2016 hierarchy for routes of exposure (inhalation, oral, dermal, intraperitoneal, intravenous) must be followed. Materials with a GHS Corrosion/Irritation (skin or eye) Category 2 or 3. If a GHS Acute Toxicity Hazard Category 1 or 2 is available, this exclusion does not apply. Hazardous materials that do not screen out by exclusions require further consideration, including:

(1) The release of hazardous materials, other than ordinary products of combustion, that could result from ignition (fire or explosion) of excluded materials.

(2) Radiological Materials.

a) Radioactive materials associated with a defined Hazard Category 1, 2, or 3 nuclear facility per 10 CFR Part 830, 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 values in accordance with DOE-STD-1027-2018, *Hazard Categorization of DOE Nuclear Facilities,* or revision used in approved hazard categorization, will require further analysis in the EPHA.

(3) Hazardous Biological Agents and Toxins. Hazardous biological agents and toxins exceeding the minimum quantities specified to be federally regulated 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*) will require further analysis in the EPHA.

(4) Chemicals.

(a) Chemicals not meeting the exclusion criteria in Section 2.a.4) c),

of this Attachment, will require further analysis in the EPHA if the quantity is greater than a quantity that can be "easily and safely manipulated by one person" in accordance with the provisions of 29 CFR Part 1910.1450, *Occupational Exposure to Hazardous Chemicals in Laboratories*. Containers with capacities of no more than 5 gallons (19 L) for liquids, 40 pounds (18 kg) for solids, or 10 pounds (4.5 kg) for compressed gases are defined as being "easily and safely manipulated by one person."

(b) Chemical waste, except for satellite accumulation points, in storage quantities exceeding individual containers with capacities of 5 gallons (19 L) for liquids, 40 pounds (18 kg) for solids, or 10 pounds (4.5 kg) for compressed gases, and concentration comparable to that which would require such a similar classification will not screen out and will require further analysis in the EPHA.

(c) Substances that may represent an extraordinary toxic hazard beyond the local incident scene due to high acute toxicity (Acute Exposure Guideline Level (AEGL)-3, Emergency Response Guideline (ERPG)-3, or TEEL-3 < 3 ppm) and dispersibility (for example, chemical warfare nerve agents) exceeding 1-pound (0.45 kg) threshold value will not screen out and will require further analysis in the EPHA.

e) Based on the professional judgment of the person performing or approving the hazardous materials screening, it is determined that additional analysis and planning is warranted, even if the material screened out in the All-Hazards Survey, an EPHA can still be required.

b. Emergency Planning Hazards Assessment. An EPHA must be developed for hazardous materials that do not screen out based on the criteria in 2.a.4) of this Attachment. The EPHA determines, through quantitative analysis, if a laboratory, plant, or site is included as a Hazardous Materials Program and provides the basis for establishing a graded approach that will meet the Hazardous Materials Program requirements outlined in this Attachment.

1) If the quantitative analysis indicates that all scenarios would not rise to at least the level of an OE classified as an Alert, an EPHA is not required to be maintained. The result of quantitative analysis is directly incorporated or referenced in the All-Hazards Survey to indicate the laboratory, plant, or site is not considered part of the Hazardous Materials Program.

2) Office of Secure Transportation (OST) recipient sites will receive an unclassified EPHA for their OST shipments and must incorporate the results from the EPHA into their emergency management program.

3) An EPHA must be developed for shipments that do not satisfy governing DOT regulations and specifications for commercial hazardous materials transport based on DOE O 460.1*, Hazardous Materials Packaging and Transportation Safety*, current version. However, if a shipment satisfies DOT regulations and specifications, then an EPHA is not required.

4) Hazardous Materials Program laboratories, plants, and sites EPHAs must:

   a) Define and describe the laboratory, plant, or site and its operations providing sufficient detail to support the identification, location, and characterization of all hazards and their potential consequences.

   b) Characterize the hazardous materials and relevant safety control systems in the laboratory, plant, or site, including:

      (1) Maximum quantity of material and its storage or process locations.

      (2) Conditions under which the material is stored or used.

      (3) Properties of the material that are needed for determination of source term and consequence analysis.

      (4) A description of relevant administrative and engineered controls that would prevent or mitigate the initiation of a hazardous material release.

   c) Select potential release scenarios associated with the hazardous materials and relevant safety control systems characterized, to include:

      (1) Credible natural, technological, and human-caused hazards.

      (2) Severe incidents, including beyond design-basis scenarios.

      (3) Consideration of malevolent acts. If information in a security risk assessment developed in accordance with DOE O 470.3, *Design Basis Threat,* current version, or consequence information is sufficient to determine that malevolent acts are bounded by the scenarios already evaluated, additional consequence modeling or calculations are not required, unless an EPHA analyst determines otherwise.

   d) Select the representative cases from the full range of possible release scenarios identified, analyze each selected scenario, calculate potential consequences, and identify recognition factors, if available. The following must be included:

      (1) Selection of analyzed scenarios using short, descriptive names.

      (2) Justification for the selection of dispersion and consequence models and input parameters.

         (a) Conservative – DOE site's 95th percentile worst case, based on the last five-years of the laboratory, plant, or site's meteorological data; or F stability and a wind speed of 1.5 m/s.

         (b) Average – DOE site specific average, based on the last five-years of the laboratory, plant, or site's meteorological data; or D stability and a wind speed of 3 m/s.

(3) Use of 25 miles for accuracy if dispersion model results go beyond 25 miles. Farther distances may be reported for information..

(4) Tabulated consequences of the release at key receptor locations to include:

(a) The region greater than or equal to 30 meters, but less than 100 meters from the point of release.

(b) The region greater than or equal to 100 meters, but less than the nearest site boundary from the point of release.

(c) The region at or beyond the nearest site boundary from the point of release.

(d) Nearest emergency response facilities and worker assembly areas.

(e) Nearest off-site at-risk populations or applicable fire-zones, or equivalent, relevant to off-site jurisdiction.

(5) Consequence of each radiological, biological, and chemical release must be calculated, summarized, and documented and must give the dose or concentration versus distance, extending out to a distance beyond where Thresholds of Early-Lethality (TELs) are exceeded and out to a distance beyond where Protective Action Criteria (PACs) are exceeded for the receptors.

(a) For radioactive materials, the current Early-Phase Protective Action Guides (PAGs) of whole-body dose promulgated by the Environmental Protection Agency (EPA) must be used [1 rem (10 mSv) adult Total Effective Dose (TED) consistent with the recommended dose limit for the public]. Use 100 rem for the TEL criteria.

(b) For chemicals, the PAC-2, listed in order of preference, must be used (use PAC-3 values for the TEL criteria):

1 AEGLs promulgated by the EPA.

2 ERPGs published by the American Industrial Hygiene Association.

3 TEELs maintained by the DOE/NNSA's Office of Emergency Management.

(c) For hazardous biological agents and toxins, PACs are considered exceeded and protective actions are required for any actual or potential release of agents or toxins outside of secondary containment barriers. Long-term PACs are specified by state or local public health officials

(6) Document functioning and non-functioning control measures and engineered safety systems, to include containment systems, fire

suppression systems, filters, administrative controls, safeguards, and security systems, if appropriate.

(7) Be documented and submitted to the FEM/SBAA for review.

e) Be reviewed periodically and, if appropriate, updated. If the review determines there are no changes from the last approved EPHA, a letter or memorandum to the FEM/SBAA must be submitted to document the review and provide notification that an update is unnecessary. The date of this letter or memorandum serves as the revised date of last approval.

f) Be updated and submitted for review before there are significant changes to laboratory, plant, or site operations or hazardous materials. At a minimum, significant changes are those that require a new EPHA or new or changed EALs. 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 EPHA update.

5) Hazards Materials Program laboratories, plants, and sites must also:

a) Adjust the emergency management program to be commensurate with hazards that remain after a decontamination and decommission action is completed at each laboratory, plant, and site closure.

b) Establish and maintain an accurate and timely method for tracking changes in operations, processes, or accident analyses that involve hazardous materials. The method must allow sufficient time for emergency management personnel to review the EPHA and modify plans and procedures, before introducing new hazardous materials into the laboratory, plant, or site.

c) Provide a temporary supplemental analysis report for hazardous materials if the hazardous materials are coming on site prior to full EPHA approval. The analysis must include:

(1) Submission for approval to the FEM/SBAA.

d) Use the EPHA results to determine the necessary planning, personnel, resources, and equipment for the Hazardous Materials Program, if the release or loss of control of the hazardous material analyzed in the EPHA indicates the potential for an Alert, Site Area Emergency (SAE), or General Emergency (GE).

(1) An Alert occurs when one or more of the following conditions are met:

(a) 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 PAG or PAC at or beyond 30 meters but not beyond 100 meters from the point of release or beyond the laboratory, plant, or site boundary.

(b) An actual or potential substantial degradation in the level of safety or security of nuclear weapon, component, or test device at a fixed

location that would not pose an immediate threat to workers or the public.

(2) An SAE occurs when one or more of the following conditions are met:

(a) 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 PAG or PAC at or beyond 100 meters from the point of release but not at or beyond the laboratory, plant, or site boundary.

(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 not the public.

(3) A GE occurs when one or more of the following conditions are met:

(a) 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 applicable PAG or PAC at or beyond the laboratory, plant, or site boundary.

c. Response Planning Elements. The EPHA provides a quantitative estimate of the consequences of each release at specific locations. Once the EPHA is complete, laboratories, plants, and sites recognized as a Hazardous Materials Program must use the results to develop their EALs, EPZs, and protective actions.

1) Develop specific EALs for all potential OEs identified in the EPHA and include protective actions corresponding to each EAL.

a) EALs are required for malevolent acts and severe incidents, including beyond design basis accidents, not bounded by scenarios already evaluated.

b) EALs development must include specific indications to distinguish between different potential classifications for an analyzed scenario or set of scenarios.

c) For EALs development, use the conservative dispersion versus distance calculations and worst-case source term results from the EPHA analysis.

d) EALs must be documented according to the incident type or recognition categories used in the laboratory, plant, or site classification procedures. For each incident type, it must:

(1) Briefly describe the incident, condition, or recognition indicators.

(2) Provide recommended classification (Alert, SAE, GE) of the OE based on the EPHA analysis.

(3) Provide protective actions to be taken by workers and off-site protective action recommendations (PARs) for the public based on distance to PAG or PAC calculations from the EPHA.

2) Determine and document the size of the EPZ.

a) The EPHA must define an EPZ for the analyzed laboratory, plant, or site as the area requiring detailed planning. For laboratories, plants, or sites with multiple EPHAs, a laboratory, plant, or site-level consolidated and integrated EPZ must be defined incorporating the EPZ from the individual EPHAs.

b) The integrated EPZ for the laboratory, plant, or site must be of sufficient size that:

(1) Analyzed scenarios do not require predetermined protective actions beyond the EPZ.

(2) The maximum EPZ for any laboratory, plant, or site must not exceed a nominal radius of 10 miles (16 km) according to report NUREG-0396/EPA 520/1-78-016, regardless of the DOE or NNSA property boundary.

(3) If the nearest distances to off-site key receptor locations are beyond the 10-mile EPZ, the key receptor locations must still be included in the laboratory, plant, or site-level emergency management plan to identify PAR distances to state and local decision makers to protect members of the public.

c) Boundaries may be defined by geopolitical lines or distance and in coordination with local, State, tribal, and territorial authorities.

d) The planning process must recognize and provide for the need to refine the predetermined protective actions and carry out protective actions in limited portions of the EPZ for specific incidents or conditions.

3. EMERGENCY RESPONSE ORGANIZATION (ERO). An ERO is a structured organization with overall responsibility for initial and ongoing emergency response. It includes personnel supporting the incident, to include those in the EOC, and personnel at the scene managing the incident. It may consist of internal and external organizations. At a minimum, the ERO must:

a. Establish mechanisms, for scaling the activation based on incident severity and expanding the initial response capability when local resources are overwhelmed.

b. Consist of personnel with capabilities and resources to respond to incidents based on the All-Hazards Planning Basis.

c. Activate for any declared OE and other severe incidents. Scale the activation based on the severity of the incident and in accordance with emergency management plans.

d. Include a position with decision-making authority (the Senior Official) to implement the laboratory, plant, or site emergency management plan, to include management and control of all aspects of the response. This person is not the Incident Commander managing the incident.

e. Establish an effective first responder capability to mitigate all-hazard emergencies including emergency medical, fire, hazardous material, and applicable rescue emergencies as derived through the All-Hazards Planning Basis and, if applicable, the Baseline Needs Assessment.

f. Establish control at the incident scene in accordance with the Incident Command System (ICS) and integrate activities with federal, state, local and tribal agencies that provide on-site emergency response at the incident scene using the principles of Unified Command.

g. Establish and maintain communications and coordination between the EOC and the incident scene.

h. Maintain and use a capability for developing, updating, and disseminating a common operating picture (COP).

i. Ensure two-way information exchange with the Headquarters Emergency Operations Center (EOC) for the duration of the incident.

j. Develop incident action plans, consistent with ICS, to support:

1) Establishment of the operational period.

2) Establishment of overall priorities.

3) Establishment of operational objectives.

4) Establishment of personnel accountability.

4. TRAINING. Training programs must include the following:

a. Worker Training.

1) Training must be conducted and documented upon initial assignment and when there are changes affecting worker actions or responsibilities.

2) Refresher training on protective actions must be provided annually. If a protective action is performed successfully during an exercise or actual incident, the annual training requirement is met for that protective action.

3) Training must cover hazards and protective actions workers may be expected to take in accordance with the All-Hazards Planning Basis. For those workers who are likely to witness a hazardous material release, the training must include the procedures for notification of the release to proper authorities.

4) Determine if additional training must be provided to workers to address response actions that may be necessary for severe incidents with regional impacts when the laboratories, plants, and sites may be isolated from off-site response assistance and infrastructure support.

5) Determine if additional training must be provided to workers at specific facilities.

6) Worker participation in a building evacuation at least annually, and consistent with frequency defined in 41 CFR Part 102-74.360, What are the Specific Accident and Fire Prevention Responsibilities of Occupant Agencies and other applicable CFRs, standards and federal, state, local, or tribal regulations. Worker participation in building evacuations must also be conducted after substantial changes are made to

a building, which result in a change to evacuation procedures or pathways.

b. ERO Training.

1) Develop a training and qualification program to establish and maintain specific emergency response capabilities as determined by the All-Hazards Planning Basis. This training is in addition to other training and certification requirements required to perform general job functions. Documentation of the training requirements must include the courses, method of instruction, frequency, and intended audience

2) Assess laboratory, plant, and site ERO member proficiency . This may be accomplished by participation in training, exercises, or real-world incidents. Emergency response personnel (for example, fire, hazardous material, police, emergency medical services) who perform essentially the same functions in an ERO as they do on a day-to-day basis demonstrate proficiency doing their everyday jobs.

3) ERO training must be provided upon initial assignment and when there are significant changes to expected emergency response capabilities. Initial ERO training requirements must include:

a) Applicable principles of ICS 100, Introduction to ICS, and ICS 700, NIMS, An Introduction

b) Laboratory, plant, and site-specific emergency response concept of operations, as documented in the emergency management plan, applicable to each position.

c) Position-specific roles and responsibilities to include plans, procedures, job aids, and associated equipment and systems.

4) Refresher training must be provided and include:

a) Identified gaps or deficiencies in individual training.

5) Hazardous Materials Program laboratories, plants, and sites must incorporate additional self-study or classroom training on EPHAs, EALs, emergency categorization, and emergency classification to those ERO members performing those functions.

c. Off-Site Response Agencies Training.

1) Annually offer orientation to emergency responders based on the laboratory, plant, and site-specific conditions and hazards identified in the All-Hazards Planning Basis.

2) Training must be available on unique hazards, as appropriate, to emergency responders, both primary and pre-defined mutual aid. This may include equipment, hazardous materials identified in the EPHA, or facility configuration.

d. Visitor Training. The laboratory, plant, or site must provide information on laboratory, plant, or site protective actions to visitors who have unescorted access.

5. EMERGENCY MEDICAL SUPPORT. DOE laboratories, plants, and sites must accomplish the following:

   a. Conduct planning for medical treatment associated with incidents identified in the All-Hazards Planning Basis. Pre-planning with off-site responder resources must address how they integrate emergency medical support in accordance with applicable laws, regulations, and standards.

   b. Establish provisions, where applicable, for sharing patient information between on-site and off-site health care providers during emergencies. Provisions must be consistent with the requirements of the 45 CFR Part 160, *General Administrative Requirements,* 45 CFR Part 164, *Security and Privacy,* Subparts A and E, and Privacy Act of 1974, as amended, 5 United States Code (U.S.C.) Section 552a, *Records Maintained on Individuals*.

   c. Hazardous Materials Program laboratories, plants, and sites must document the process to transport, accept and treat contaminated, and injured personnel. Ensure implementing agreements, as appropriate, are in place with emergency medical first responder organizations, medical receiving facilities, and emergency medical transport services (including all reasonable modes of transportation).

6. OFF-SITE RESPONSE AGENCIES. Laboratories, plants, and sites must establish and maintain interfaces with federal, state, local, or tribal agencies responsible for emergency response or those who may be used to supplement response capabilities based on threats and hazards identified in the All-Hazards Planning Basis, to include planning for severe incidents. DOE laboratories, plants, and sites must accomplish the following activities with off-site response agencies:

   a. Conduct training and orientation.

   b. Determine access protocols for emergency conditions.

   c. Establish a process for communications to use during on-site response.

   d. Establish a process to coordinate emergency public information during an incident involving off-site response agencies that may affect or be of interest to the media and public as required in Attachment 2, Section 12 of this Order.

   e. Hazardous Materials Program laboratories, plants, and sites must coordinate with federal, state, local, and tribal agencies on the following:

      1) Address off-site protective action recommendations based on the laboratory, plant, or site's EPHAs.

      2) Determine a notification process to use during emergencies when protective actions may be recommended off-site.

      3) Provide information from EPHA analyses to appropriate state, tribal, county, and local agencies on estimated bounding scenario distance where PAC would be exceeded at specific off-site receptors for off-site organizations' incident response planning. In addition, laboratories, plants, and sites must provide information as defined in 40 CFR 355, *Emergency Planning and Notification*.

      4) Provide near real-time information to appropriate state, tribal, county, and local

agencies during a release of hazardous materials when PAC may be exceeded at specific off-site receptors, including at-risk populations such as emergency buildings, schools, and hospitals, to facilitate off-site organization decision-making regarding the appropriate level of response.

5) Conduct planning for off-site radiological monitoring support with state, tribal, county, and local governments for GE involving radiological material releases.

7. EMERGENCY CATEGORIZATION AND CLASSIFICATION. Categorization is the DOE process for determining whether an incident or condition is an OE. Categorization applies to all laboratories, plants, and sites. The classification of an OE is the analysis of hazardous materials involved in an OE to determine if they fall into one of the three emergency classes (Alert, SAE, GE). Classification only applies to Hazardous Materials Program laboratories, plants, and sites.

a. Categorization.

1) Laboratories, plants, and sites must declare an OE when incidents occur that represent a significant degradation in the level of safety at a laboratory, plant, or site resulting in potential health and safety hazards to workers or the public. Indicators for identifying the conditions of an OE must be developed for the spectrum of emergency conditions identified in the All-Hazards Planning Basis. For hazardous materials sites, these indicators are defined in the EALs.

2) Predetermined decision-makers must categorize an incident as an OE within 15 minutes after the availability of laboratory, plant, or site's defined indicators that an OE has occurred. Categorization must occur no more than 30 minutes after discovery. Such incidents include, but are not limited to:

a) Incidents or conditions that represent, cause, or have the potential to cause serious health and safety impacts to workers or members of the public.

(1) 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 the PAG at 1 rem TED or PAC-2 at 30 meters.

(2) An occurrence that causes significant structural damage to DOE facilities, with confirmed or suspected personnel injury or death.

(3) Any mass casualty incident, as determined and documented by the laboratory, plant, or site.

(4) A criticality incident.

(5) An off-site hazardous material incident not associated with DOE operations that is observed to have, or is predicted to have, an impact on-site such that protective actions are required for DOE workers.

b) Any actual or potential release of a hazardous biological agent or toxin outside of the secondary barriers of the biocontainment area.

c) Any actual or potential release of hazardous material or regulated pollutant to the environment that could result in significant off-site consequences, such as major wildlife kills, wetland degradation, aquifer contamination, or

the need to secure downstream water supply intakes.

d) Foreign involvement in security incidents must be reported to the Counterintelligence Directorate within the Office of Intelligence and Counterintelligence, to include:

(1) Unplanned detonation of an explosive device or a credible threat of detonation resulting from the location of a confirmed or suspected explosive device.

(2) A terrorist attack, active threat (e.g., armed assault), cyber security incident with the potential to endanger human life, health, or the environment, or sabotage incident involving a DOE laboratory, plant, or site.

(3) Kidnapping or taking hostages involving a DOE laboratory, plant, or site worker or visitor.

3) An OE, once categorized, will remain an OE until the emergency response is terminated, unless the original categorization was incorrect.

c. Classification.

1) Hazardous Materials Program laboratories, plants, and sites must:

a) Use developed EALs from the All-Hazards Planning Basis to classify OEs involving the actual or potential airborne release of (or loss of control over) hazardous materials from on-site as an Alert, SAE, or GE.

b) Classify an OE as either an Alert, SAE, or GE, in order of increasing severity. Classification aids in the rapid communication of critical information and the initiation of appropriate time-urgent emergency response actions.

c) Declare a classification 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. The declaration of:

(1) An Alert requires the notification and assembly of the ERO. It may not require activation of the EOC.

(2) An SAE requires activation of the ERO. It may not require activation of the EOC.

(3) A GE requires the activation of the ERO, the EOC, and the recommendation of public protective actions.

2) OEs, once classified, must not be downgraded to a lower classification, unless the original classification was incorrect. Note that OST OEs are not classified.

8. PROTECTIVE ACTIONS.

a. DOE laboratories, plants, and sites must identify protective actions commensurate with the All-Hazards Planning Basis and potential hazards at the laboratories, plants, and sites; and maintain procedures for prompt issuance of protective actions to workers.

b. Protective actions must be predetermined and serve to minimize emergency related consequences and maximize life safety and health. DOE laboratories, plants, and sites must accomplish the following:

1) Develop a process to issue protective actions.

2) Develop a procedure to account for workers and visitors and to assist in identifying workers and visitors who may need rescue or assistance.

3) Consider whether additional protective actions are needed for severe incidents, such as self-help instructions when the laboratory, plant, or site is isolated from outside response assistance and evacuation of the laboratory, plant, or site when conditions are deteriorating.

c. Hazardous Materials Program laboratories, plants, and sites must incorporate the following additional requirements:

1) Identify predetermined on-site protective actions and off-site PARs consistent with the hazard and duration of the release based upon the results of EPHAs and EALs.

2) Identify and evaluate incidents in which combinations of protective actions for varying buildings and locations may apply.

3) Identify authorities for the lifting or adjustment of protective actions once protective actions have been taken.

4) Establish methods for controlling, monitoring, and maintaining records of personnel exposure to hazardous materials.

5) Establish methods for controlling access to contaminated areas and for decontaminating personnel or equipment exiting the area.

6) Identify actions that may be taken to increase the effectiveness of protective actions, such as shutdown of heating, ventilation, and air conditioning while sheltering-in-place.

9. CONSEQUENCE ASSESSMENT. Hazardous Materials Program laboratory, plant, or site must accomplish the following:

a. Consider site specific characteristics, which must include topography and meteorology.

b. Integrate consequence assessment with emergency classification and protective action decision-making.

c. Integrate facility and field indications and measurements per the emergency management plan.

d. Coordinate with off-site response agencies.

e. Maintain the capability to use the National Atmospheric Release Advisory Center (NARAC) as part of near real-time consequence assessment activities for primary, backup, and/or corroborating consequence assessments.

f. Ensure that laboratory, plant, or 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 NARAC to facilitate near real-time computations.

g. Maintain consequence assessment and atmospheric dispersion modeling resources with the capability to:

1) Establish provisions 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 on-site and off-site consequences.

2) Indicate the distance at 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.

3) Conduct continuous ongoing assessment for the duration of the emergency as additional information becomes available.

4) Ensure implementing agreements, as appropriate, are in place with state, local, and tribal organizations expected to perform off-site field monitoring in support of the consequence assessment.

10. EMERGENCY FACILITIES, EQUIPMENT, AND SYSTEMS. 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.

a. Personal Protective Equipment (PPE).

1) Laboratories, plants, and sites must provide appropriate PPE to assigned emergency responders commensurate to the hazards.

2) Laboratories, plants, and sites must identify, in the emergency management plan or other documentation, caches of specialty equipment that may be required if an incident occurs. These caches must be inventoried, at a minimum, annually.

b. Communications Equipment.

1) Laboratories, plants, and sites must have an emergency notification system capable of providing immediate notification of protective actions to affected employees, as required in Attachment 2, Section 11.a.(2) of this Order.

2) Communications equipment and the notifications capability must be tested at least annually.

c. Hazardous Materials Program laboratories, plants, and sites must incorporate the following additional requirements.

1) Designate and maintain an EOC capability, which can be physical, virtual, or hybrid model. The EOC must:

a) Be accessible on a 24-hour basis to on-site and off-site ERO members.

b) Be equipped with systems and equipment to support ERO activities. This includes information management, mapping, and secure and non-secure communications.

c) Ensure that the air filtration system removes the types of plausible contaminates if occupants rely on a filtration system for habitability. High Efficiency Particulate Air (HEPA) filters used for protection from airborne contaminants must be certified at an approved HEPA filter test facility.

2) If applicable maintain an Alternate EOC (AEOC) capability that can perform the required functions of the primary EOC if the primary EOC is not available.

a) 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.

b) Ensure that the air filtration system removes the types of plausible contaminates if occupants rely on a filtration system for habitability. HEPA filters used for protection from airborne contaminants must be certified at an approved HEPA filter test facility.

3) Joint Information Center (JIC).

a) Have provisions in place to establish a JIC to serve as a working location, where multiple jurisdictions gather, process, and disseminate public information during an emergency. The JIC can be a physical, virtual, or hybrid model.

b) Maintain equipment and systems to support JIC activities to include public inquiry, media inquiry, media monitoring, media support services, and management and administrative activities.

c) Identify a location for the JIC outside the EPZ.

4) Communications Equipment.

a) Maintain EOC primary and backup communications capabilities adequate to support incidents identified in the EPHAs.

b) Maintain equipment capable of transmitting information in a secured fashion if classified information or controlled unclassified information (CUI) is generated, handled, or stored by the laboratories, plants, and sites.

5) Meteorological Monitoring Equipment.

a) Maintain a meteorological capability to provide real-time on-site/local meteorological data and maintain access to meteorological expertise for site consequence assessments. This capability can be subcontracted or utilize a commercial or state government application.

b) The on-site data collection, processing, and availability must meet current guidance and standards and be appropriate for the level of incident possible per current directives and standards (DOE O 458.1, *Radiation Protection of the Public and the Environment*).

c) Maintain or have access to a meteorological modeling capability or access to reliable real-time off-site meteorological data to conduct proper off-site consequence assessment activities if the lab, plant, or site has EPHA results that indicate the potential for a GE.

11. NOTIFICATIONS AND COMMUNICATIONS. 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 OE is terminated. DOE laboratories, plants, and sites must accomplish the following:

    a. Notifications.

        1) Provide prompt emergency notifications to emergency response personnel and response organizations.

        2) Provide immediate notification and protective actions 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.

        3) Notify the SBAA or FEM as applicable, and state, local, and tribal organizations within 30 minutes of categorization of an OE or the activation of the ERO for an incident not categorized as an OE, to include incidents defined in the Headquarters EOC issued CIRs. The SBAA or FEM will notify the Headquarters EOC.

        4) Hazardous Materials Programs must notify the FEM/SBAA, Headquarters EOC, and state, local, and tribal organizations of the OE classification within 15 minutes of categorization.

        5) Emergency notification to the Headquarters EOC must consist of a human phone call providing as much information as is known at the time. The same information must be provided by e-mail either immediately prior to or following the phone call. Information for initial notification includes, as available, the following:

            a) Description of the emergency.

            b) Date and time emergency was discovered or terminated.

            c) Current weather conditions (wind speed, direction, precipitation) at the incident location.

            d) Other notifications made.

            e) Status of EOC activation (full, partial, standing up, not activated).

            f) Assessment of current incident conditions (improving, stable, degrading, undetermined).

            g) Damage and casualties.

            h) Protective actions implemented.

            i) Potential and actual impacts.

            j) Agencies involved.

            k) Level of public/media attention.

            l) Contact information for the DOE on-scene point of contact.

        6) Incidents involving an OST OE or OST transportation incident on-site must incorporate the location of the incident, including coordinates.

b. Communications.

1) Provide communication methods among on-scene responders, emergency managers, and response facilities.

2) Provide updates to the Headquarters EOC based upon the emergency conditions and/or as directed by Headquarters.

3) Establish provisions to provide updates to workers during an emergency.

4) Initiate, at least annually, communications checks on classified and unclassified communication systems used for initial notification of the Headquarters EOC.

5) Ensure communication among response facilities, field response elements, and off-site command centers by providing a COP 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 activities data, and field monitoring data.

12. EMERGENCY PUBLIC INFORMATION. DOE laboratories, plants, and sites must provide accurate, candid, and timely information to workers, the media, and the public during an emergency. DOE laboratories, plants, and sites must:

a. Establish and maintain an emergency public information capability consistent with the All-Hazards Planning Basis.

b. Document the emergency public information capability. This document must include:

1) Identification of personnel, resources, and facilities necessary to support emergency public information activities.

2) Identification of a public information officer who will interact with the media during emergencies.

3) Provisions for coordination of information to be released during an emergency.

4) Identification of public information media to be used and monitored, such as web sites, social media, news releases, and news briefings.

5) Identification of provisions for coordination of public information activities with off-site response agencies, state, local and tribal governments, and federal emergency response plans, as appropriate.

6) Provisions for initial news releases or public statements to be approved by the SBAA or Field Element official responsible for emergency public information review and dissemination.

7) Provisions to coordinate with the Headquarters EOC and DOE's Office of Public Affairs on information released after the initial release. This includes information released through news releases and social media. This is a Federal Responsibility.

13. TERMINATION. DOE laboratories, plants, and sites must accomplish the following for termination:

a. Termination.

1) Establish a predetermined set of criteria for terminating an OE. Emergency

termination criteria must consider:

a) Emergency response activities have stopped.

b) The situation has been stabilized.

c) Potential threats to workers, the public, the environment, and national security have been characterized.

d) Conditions no longer meet established emergency categorization criteria.

e) It appears unlikely that conditions will deteriorate.

2) The decision to terminate an OE classified as an Alert, SAE, or GE can only be made when capabilities and resources of the ERO are no longer needed to manage the incident.

3) The decision to terminate an OE must be a formal announcement or acknowledgement that the situation is stabilized, and that the response activity is ending or has been substantially scaled back.

4) Coordinate the decision to terminate the emergency with the responding organizations and the Field Element or appropriate Federal Manager/SBAA, as applicable.

5) Prior to termination, identify and document the recovery organization that will activate and address the actions necessary to restore the laboratory, plant, or site to normal operations.

6) The SBAA or FEM will notify the Headquarters EOC and other organizations previously notified when the emergency is terminated.

b. Post Incident Reporting.

1) Complete an After-Action Report (AAR) evaluating the ERO when activated for a real-world incident categorized as an OE, to identify lessons learned and corrective actions.

2) For an OE, submit the AAR to the FEM/SBAA for further dissemination to the Program Secretarial Officer. 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*, current version.

14. EXERCISES. DOE laboratories, plants, and sites will ensure an appropriate process is in place to practice activation of the Emergency Management system and must have an exercise program that is consistent with the fundamental principles of the Department of Homeland Security Exercise and Evaluation Program (HSEEP). The exercise program must include:

a. Conduct of an annual exercise (discussion-based or operation-based) to test and validate emergency plans and procedures. At a minimum, for non-hazardous material laboratories, plants, and sites, every three years the annual exercise must be an operations-based exercise. For Hazardous Materials Program laboratories, plants, and sites, the annual exercise must be an operation-based exercise every year.

b. Rotation of the annual exercise scenarios among the threats and hazards identified in the All-Hazards Planning Basis.

c. Submission of the exercise schedule annually to the FEM/SBAA.

d. Formal invitation to primary off-site response agencies to participate in the annual exercise.

e. Formal invitation of laboratory, plant, or site subject matter experts as it relates to the scenario, and security program personnel to actively participate in the annual exercise.

f. Submission of the annual exercise plan to the FEM/SBAA, no later than 30calendar days before the annual exercises.

g. Development of AARs that include issues, lessons learned, and overall evaluation results.

h. Hazardous Materials Program laboratories, plants, and sites must include the following additional requirements in their exercise program:

    1) Develop a rolling five-year schedule. The schedule must include:

        a) OST Recipient Sites must conduct an exercise (discussion or operations-based) with OST once every five years. The exercise must assess and validate procedures related to the laboratory, plant, or site's ability to effectively respond to on-site OST OE or OST transportation emergency. The exercise scenario will be developed, in coordination with OST, for a typical shipment to the laboratory, plant, or site.

        b) Off-site response agencies should be invited to participate in a full-scale exercise (FSE) as appropriate.

        c) Demonstration of ERO capability.

        d) Integration with federal, state, local, and tribal agencies as appropriate.

ATTACHMENT 3
REFERENCES

a. Public Law (P.L) 73-703, *Atomic Energy Act of 1954,* as amended.

b. P.L. 93-288, *Robert T. Stafford Disaster Relief and Emergency Assistance Act,* as amended through P.L. 118–44, Enacted March 18, 2024.

c. P.L. 106-65, *National Defense Authorization Act for Fiscal Year 2000,* dated 10-05-1999.

d. P.L. 115-325, *Federal Power Act,* enacted 12-18-2018.

e. Title 5 United States Code (U.S.C.) § 552a, *Records Maintained on Individuals.*

f. Title 5 U.S.C. § 552, *Freedom of Information Act.*

g. Title 7 Code of Federal Regulations (CFR) Part 331, *Possession, Use, and Transfer of Select Agents and Toxins.*

h. Title 9 CFR Part 121, *Possession, Use, and Transfer of Select Agents and Toxins.*

i. Title 10 CFR Part 71, *Packing and Transport of Radioactive Materials.*

j. Title 10 CFR Part 205.350-353, *Report of Major Electric Utility System Emergencies.*

k. Title 10 CFR Part 830, *Nuclear Safety Management.*

l. Title 29 CFR Part 1910.1450, *Occupational Exposure to Hazardous Chemicals in Laboratories.*

m. Title 40 CFR Part 68, *Chemical Accident Prevention.*

n. Title 40 CFR Part 300, *National Oil and Hazardous Substances Pollution Contingency Plan.*

o. Title 40 CFR Part 355, *Emergency Planning and Notification.*

p. Title 41 CFR Part 102-74.360, *What are the Specific Accident and Fire Prevention Responsibilities of Occupant Agencies?*

q. Title 42 CFR Part 73, *Select Agents and Toxins.*

r. Title 45 CFR Part 164, Subparts A and E, *Security and Privacy.*

s. Presidential Policy Directive (PPD) 8, *National Preparedness,* dated 03-30-2011.

t. PPD 44, *Enhancing Domestic Incident Response,* dated 11-07-2016.

u. Homeland Security Presidential Directive (HSPD) 5, *Management of Domestic Incidents*, dated 02-28-2003.

v. *Homeland Security Exercise and Evaluation Program (HSEEP)*, Department of Homeland Security, dated 10-2020.

w. *National Cyber Incident Response Plan*, Department of Homeland Security, dated 12-16-2016.

x. *National Incident Management System*, Third Edition, Department of Homeland Security,

dated 11-17-2017.

y. *National Response Framework*, Fourth Edition, Department of Homeland Security, dated 10-28-2019.

z. DOE O 153.1, *Departmental Nuclear Emergency Support Team Capabilities*, current version.

aa. NE O 226.1, *Implementation of Department of Energy Oversight Policy*, current version.

bb. NE O 232.2, *Occurrence Reporting and Processing of Operations Information*, current version.

cc. DOE O 243.1, *Records Management Program*, current version.

dd. DOE O 251.1, *Department Directives Program*, current version.

ATTACHMENT 4
DEFINITIONS

This Attachment provides definitions for terms used in NE O 151.1, *Comprehensive Emergency Management System*, and is associated where Contractor Requirements Document (Attachment 1 to NE O 151.1) is inserted.

1. **Active Threat.** A dynamic, quickly evolving situation involving an individual (or individuals) using deadly physical force.

2. **After-Action Report (AAR).** A document intended to capture observations, issues, and lessons learned from an exercise or real-world incident.

3. **Alternate Emergency Operations Center (AEOC).** A physical, virtual, or hybrid location for use when the primary EOC is unable to support a response effort.

4. **Annual (such as "annual exercise").** Occurring or recurring once within a specified, one year period, as defined by the laboratory, plant, or site.

5. **Assessment**. An evaluation, performed to determine and document whether items, processes, systems, or services meet specified requirements and perform effectively.

6. **Categorization.** The DOE process for determining whether an incident or condition is an OE.

7. **Classification.** The process of assessing potential release of hazardous materials in Operational Emergencies to determine if they fall into one of the three emergency classes (Alert, Site Area Emergency (SAE), or General Emergency (GE)).

8. **Compliance.** Conforming to the requirements of NE O 151.1, *Comprehensive Emergency Management System* (and referenced federal laws and regulations).

9. **Common Operating Picture (COP).** A standard overview of an incident, thereby providing incident information that enables the Incident Commander/Unified Command and any supporting agencies and organizations to make effective, consistent, and timely decisions. Compiling data from multiple sources and disseminating the collaborative information ensures that all responding entities have the same understanding and awareness of incident status and information when conducting operations.

10. **Critical Information Requirements (CIR).** A comprehensive list of elements of information that DOE and NNSA leaders have identified as requiring immediate notification to facilitate timely decision making.

11. **Discovery.** The point at which laboratory, plant, or site workers or visitors identify or become aware of an incident or condition.

12. **Discussion-based Exercise.** These types of exercises typically highlight existing plans, policies, mutual aid agreements, and procedures, and can be used as tools to familiarize agencies and personnel with current or expected capabilities. Discussion-based exercises include *seminars, workshops, tabletops,* and *games*.

13. **Drill.** An operations-based exercise often employed to validate a single operation or function.

14. **Emergency.** Any incident, whether natural, technological, or human-caused, that necessitates responsive action to protect life, property, critical infrastructure, or environment.

15. **Emergency Action Level (EAL).** A predetermined, laboratory, plant, or site-specific, observable threshold for an initiating condition that, when met or exceeded, places the laboratory, plant, or site in a given emergency categorization with the potential for further classification.

16. **Emergency and Incident Management Council (EIMC).** The primary DOE strategic-level leadership coordination, synchronization, and oversight mechanism for senior Department leadership during an emergency of such significance to warrant Council activation, to include those incidents that might require the coordinated efforts of several sites or programs.

17. **Emergency Notification System (ENS)**. A type of Emergency Communication System that facilitates the real-time, one-way dissemination or broadcast of messages to one or many groups of people at a laboratory, plant, or site.

18. **Emergency Operations Center (EOC).** A designated location where the coordination of information and resources and advanced planning to support the incident (on-scene operations) activities normally takes place. The EOC may be a physical, virtual, or hybrid model.

19. **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.

20. **Emergency Planning Zone (EPZ).** A zone identified to facilitate a predetermined strategy for protective actions during a defined emergency.

21. **Emergency Response Organization (ERO).** A structured organization with overall identified responsibilities for initial and ongoing emergency response and mitigation.

22. **Evacuation.** The directed relocation of a population out of a high-risk area prior to or during an emergency. The evacuation of a laboratory, plant, or site may be necessary when a hazard, be it natural, technological, or human-caused, threatens the safety of those within the laboratory, plant, or site.

23. **Exercise.** An activity delivered through discussion or action to develop, assess, or validate capabilities to achieve planned objectives. Exercises, under the Department of Homeland Security Exercise and Evaluation Program (HSEEP) can be discussion-based (examples include seminars, workshops, tabletop exercise, and games), or operations-based (drills, functional exercises, or full-scale exercises).

24. **Full-scale Exercise (FSE)**. An operations-based exercise that is typically those most complex and resource-intensive of the exercise types and often involves multiple agencies, on-site and off-site jurisdictions/organizations, and real-time movement of resources.

25. **Functional Exercise.** An operations-based exercise designed to test and evaluate capabilities and functions in a realistic, real-time environment; however, movement of resources is usually simulated.

26. **Globally Harmonized System (GHS).** A framework that standardizes the classification and labeling of chemicals worldwide. It is one of two hazardous material screening methods available to laboratories, plants, and sites.

27. **Graded Approach.** The processes and procedures that incorporates a risk-based approach to assess and protect against the consequences of hazards (natural, technological, and man-made) that may have an adverse impact on national security, the environment, or that may pose significant danger to the health and safety of DOE Federal and contractor employees or the public.

28. **Hazardous Material.** Any hazardous biological agents and toxins; any radioactive or radiological material that emits ionizing radiation; any solid, liquid, or gaseous chemical that is toxic, explosive, flammable, or corrosive, or could otherwise adversely affect the health and safety of the public or the workers or harm the environment. Fuel oil and gases are excluded in the definition of hazardous materials used in this Order.

29. **Hazardous Materials Program**. An emergency management program with additional requirements in training, emergency management services, off-site response agencies, emergency classification, protective actions, emergency facilities and equipment/systems, emergency public information, termination and recovery and exercises.

30. **Homeland Security Exercise and Evaluation Program (HSEEP).** A set of guiding principles for exercise and evaluation programs as well as a common approach to exercise program management, design and development, conduct, evaluation, and improvement planning.

31. **Incident.** An unplanned occurrence (natural, technological, or human-made) that necessitates a response to protect life, property, critical infrastructure, or environment.

32. **Incident Command System (ICS).** A management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities,

equipment, personnel, procedures, and communications operating within a common organizational structure.

33. **Incident Commander.** The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The Incident Commander has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

34. **Issue.** Factual statement of identified findings and deficiencies (failure to meet a documented legal, regulatory, performance, compliance, or other applicable requirements) in the Emergency Management Program at a laboratory, plant, or site resulting from an exercise, self-assessment, independent assessment, testing and maintenance, or real-world event.

35. **Joint Information Center (JIC).** A facility established to coordinate critical emergency information, crisis communications, and public affairs functions. It is the central point of contact for all news media.

36. **Key Receptor Location.** Public entities that require protective action recommendations based on at-risk populations. The minimum key receptor locations for planning purposes include, but are not limited to, hospitals, emergency response agencies, schools, and correctional facilities.

37. **Laboratories, Plants, Sites.** These include DOE federal owned, leased, and contractor-operated laboratories, plants, sites, buildings/locations, secure transportation activities, administrative offices in the field, and headquarters offices.

38. **Mass Casualty Incident.** An incident in which the number of patients and the severity of their injuries exceed the capacity of area medical systems and facilities, as identified by the laboratory, plant, or site. The incident produces more patients than the responding jurisdiction is *routinely* capable of handling and necessitates an uncommon level of resource mobilization.

39. **Materials of National Security Interest.** A class of strategic materials used in the development, testing, production, and maintenance of nuclear weapons and other materials that have been designated as critical to national security.

40. **Mitigation.** The effort to reduce loss of life and property by lessening the impact of incidents. Mitigation includes any activities that prevent an emergency, reduce the chance of an emergency incident occurring, or reduce the damaging effects of unavoidable incidents.

41. **National Incident Management System (NIMS).** A set of principles that provides a systematic, proactive approach guiding government agencies at all levels, nongovernmental organizations, and the private sector to work seamlessly to prevent,

protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, to reduce the loss of life or property and harm to the environment.

42. **National Security Area (NSA).** A DOE-controlled area established for radiological incidents involving a nuclear weapon, special nuclear material, and/or classified components that are in DOE custody.

43. **Operational Emergency (non-OST).** A major unplanned or abnormal incident or condition that involves or affects DOE facilities and activities by causing or having the potential to cause serious health, safety, or environmental impacts.

44. **Operational Emergency (OST).** Incidents or conditions that represent an actual or potential release of hazardous materials from an OST shipment, or major security incident without a hazardous materials release. Final confirmation/determination of an OST OE will be made by the OST Operations Duty Officer in conjunction with the OST Emergency Response Duty Officer. The declaration of an OST OE by OST has a significant impact on DOE emergency response and coordination.

    (1) An attack or other criminal act involving an OST transportation mission that requires the deployment of OST security assets at the emergency scene.

    (2) Any incident involving an OST transportation shipment containing hazardous materials that causes the initial responders to initiate protective actions at locations beyond the immediate area.

    (3) Failures in safety or security systems that threaten the integrity of a nuclear weapon, component, or test device.

    (4) A transportation accident resulting in damage to a nuclear explosive, nuclear explosive-like assembly, or Category I/II quantity of Special Nuclear Material (SNM).

45. **Operations-based Exercises.** Operations-based exercises are characterized by actual response, mobilization of apparatus and resources, and commitment of personnel, usually held over an extended period. Operations-based exercises can be used to validate plans, policies, agreements, and procedures and include *drills*, *functional exercises,* and *full-scale exercises.* They can clarify roles and responsibilities, identify gaps in resources needed to implement plans and procedures, and improve individual and team performance.

46. **Proficiency.** Demonstrated skill and competency acquired from training and experience.

47. **Protective Actions.** Actions taken to minimize the consequences of emergencies and to protect the health and safety of workers and the public.

48. **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.

49. **Protective Action Guides (PAG).** Radiation dose guidelines that trigger protective actions such as evacuation or staying indoors. This Order follows the Environmental Protection Agency-developed Manual of Protective Action Guides (PAG Manual) to help federal, state, and local authorities decide how to protect the public during radiological emergencies.

50. **Protective Action Recommendation (PAR).** Predetermined actions designed to protect the health and safety of the public that are consequence-based decisions (known as protective actions for the laboratory, plant, or site). DOE laboratories, plants, or sites recommend protective actions to the public and community for Operational Emergencies that have the potential to cause off-site consequences.

51. **Public Information Officer.** A member who serves as the conduit for information to internal and external stakeholders, including the media or other organizations seeking information directly from the incident.

52. **Radiological/Nuclear Assets (RN).** The collective group of capabilities available to provide technical and operational assistance for any type of nuclear or radiological accident or incident. These DOE assets can be deployed to assist in an emergency at any DOE laboratory, plant, or site, or anywhere domestically or internationally.

53. **Recipient Site.** Any DOE laboratory, plant, or site, Nuclear Enterprise, Department of Defense, or Materials of National Security Interest transload location that receives or ships material through the Office of Secure Transportation (OST).

54. **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.

55. **Response.** Activities that address the short-term, direct effects of an incident and include immediate actions to save lives, protect property, critical infrastructure, the environment, achieve incident stabilization, and meet basic human needs.

56. **Senior Response Official.** Federal employee who provides leadership at the incident scene for DOE radiological response assets.

57. **Senior Federal Official (SFO).** A senior management federal personnel, designated by the Field Element Manager/Field Operations Manager, assigned to the EOC in his/her capacity with decision-making authority and responsibilities.

58. **Senior Official.** An individual (senior management level fed or non-fed), designated by the Field Element Emergency Management Team, who serves on the ERO as an emergency manager with decision-making authority and responsibilities.

59. **Severe Incident.** As defined in OE-1:2013-1, *Improving Department of Energy Capabilities for Mitigating Beyond Design Basis Incidents*, any incident considered Beyond Design Basis that is expected to cause major disruptions/damage to site-wide and off-site infrastructure, as well as increased risk to on-site personnel, possibly resulting in injuries and fatalities. These incidents could potentially isolate a facility or site from on-site/off-site response assistance and infrastructure support.

60. **Special Nuclear Material (SNM).** As defined in 10 CFR Part 810, *Assistance to Foreign Atomic Energy Activities*, Plutonium, Uranium-233, or Uranium enriched above 0.711 percent by weight in the isotope Uranium-235.

61. **Termination.** The declared conclusion of emergency response activities signaling the onset of the Recovery phase.

62. **Total Effective Dose.** Sum of the effective dose (for external exposures) and the committed effective dose.

63. **Transportation Emergency (OST).** Any accident involving an OST transportation shipment or convoy, in mission status, that cannot be categorized as an OST OE as outlined in NE O 151.1 but may require response beyond normal operations and local response asset capabilities. No protective action recommendations for nuclear cargo are issued, but due to the duration, location and support needed, implementation of NIMS/ICS procedures or other response actions may be required to mitigate or resolve the emergency.

64. **Visitor.** An on-site individual who is not an employee, contractor, or subcontractor of the laboratory, plant, or site.

65. **Worker.** Federal, contractor, or subcontractor employee or visitor performing activities at a DOE laboratory, plant, or site.