

U.S. Department of Energy
Washington, DC

ORDER

DRAFT
DOE O 151.1D

Approved: XX-XX-XXXX

SUBJECT: COMPREHENSIVE EMERGENCY MANAGEMENT SYSTEM

1. PURPOSE. To provide the Department of Energy (herein referred to as DOE, department, or complex) policy for the development, management, and administration of the DOE Emergency Management System. This Order and its associated Guides meet the requirements of Executive Orders, Policies, and Directives regarding emergency management; including Homeland Security Presidential Directive (HSPD) 5, which mandates that the Department adopt the National Incident Management System, in support of the National Response Framework. It assigns responsibilities, authorities, and accountabilities to the appropriate levels of Department management, promotes collaboration through consensus based programmatic decision making, and provides policy direction for coordination of these activities within the Department, and with other government and non-government organizations, to ensure efficiency and effectiveness.
2. CANCELLATION. DOE O 151.1C, *Comprehensive Emergency Management System*, dated 11-2-05 and DOE Manual 151.1-1, *Power Marketing Administration Emergency Management Program*, dated 9-18-08, which was incorporated into this Order. 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 (CRD) that were 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contract unless and until the contract or regulatory commitment is modified to either eliminate requirements that are no longer applicable or substitute a new set of requirements.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. Except for the equivalencies and exemptions in paragraph 3c, the provisions of this Order apply to all Departmental elements.
 - (1) Where a responsibility or authority is assigned to an organization that is restructured, the responsibility and authority will be reassigned to the appropriate successor organization as explicitly determined by the appropriate Lead Program Secretarial Officer.
 - (2) The Administrator of the National Nuclear Security Administration (NNSA) must assure that NNSA employees comply with their responsibilities under this directive. Nothing in this directive will be construed to interfere with the NNSA Administrator's authority under section 3212(d) of Public Law (P.L.) 106-65 to establish Administration specific policies, unless disapproved by the Secretary of the DOE (Secretary).
 - b. DOE Contractors.

- (1) Except for the equivalencies and exemptions in paragraph 3c, the CRD, Attachment 1, sets forth requirements of this Order that will apply to contracts that include the CRD.
 - (2) The CRD or its requirements must be inserted in site, facility, and activity management contracts.
- c. Equivalencies and Exemptions. Equivalencies and exemptions to this Order are processed in accordance with DOE O 251.1, *Departmental Directives Program*, dated 1-15-09.
- (1) Equivalencies and exemptions to this Order must be documented in memorandum form and posted on the DOE directives website. In cases where an equivalency or exemption is granted, copies of the memorandum will be provided to the Associate Administrator, Office of Emergency Operations for informational purposes and to the Office of Management for posting on the DOE directives website. The memorandum must:
 - (a) briefly and adequately justify the reasons for the equivalency or exemption;
 - (b) reference the office(s), or locality, and requirement(s) for which the equivalency or exemption is sought;
 - (c) have the concurrence of the Cognizant Field Element Manager and the cognizant Program Secretarial Officer;
 - (d) contain the opinion of the Associate Administrator, Office of Emergency Operations regarding the proposal; and
 - (e) have the final disposition of the proposal made by the cognizant Program Secretarial Officer or their designee.
 - (2) Equivalency. In accordance with the responsibilities and authorities assigned by Executive Order 12344, codified in Title 50 of the United States Code sections 2406 and 2511, and to ensure consistency through the joint U.S. Department of the Navy and DOE Naval Nuclear Propulsion Program, the Deputy Administrator for Naval Reactors (Director) will implement and oversee requirements and practices pertaining to this Order for activities under the Director's cognizance, as deemed appropriate, with the exception of reporting required by Title 29 of the Code of Federal Regulations (CFR) Part 1960, "Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters."

- (3) Exemption. This Order does not apply to activities that are regulated by the U.S. Nuclear Regulatory Commission (NRC) or a State under an agreement with the NRC, including activities certified by the NRC under Section 1701 of the *Atomic Energy Act of 1954, as Amended*. This Order will apply to activities where the NRC does not exercise regulatory authority or by agreement with the NRC.
- (4) Exemption. This Order does not apply to transportation activities that are regulated by the U.S. Department of Transportation.

4. REQUIREMENTS.

a. General.

- (1) Each DOE and NNSA location, including secure transportation activities, administrative offices in the field, and headquarters offices, must develop and participate in an integrated and comprehensive Emergency Management System to ensure that –
 - (a) the Department can respond effectively and efficiently to all Operational Emergencies and Energy Emergencies and can provide Emergency Assistance so that appropriate response measures are taken to protect the worker, the public, the environment, and national security;
 - (b) emergencies are recognized, categorized and, as necessary, classified promptly, and parameters associated with the emergency are monitored to detect changed and degraded conditions;
 - (c) emergencies are reported, and notifications are made in a timely manner; and;
 - (d) reentry activities are properly and safely accomplished in accordance with approved guidance, and recovery and post-emergency activities commence in a timely and efficient manner.
- (2) Each DOE and NNSA site, facility, and activity 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). See Attachment 3, “Emergency Management Core Program.
- (3) The Headquarters Emergency Operations Center must serve as the point of contact for all incidents, events, emergencies, emergency notifications and reports. Accordingly, the Headquarters Emergency Operations Center will receive, coordinate, validate, and disseminate emergency information to headquarters elements, Program Offices, and Program Office emergency

points of contact, Field Elements, the White House Situation Room, other Federal, State, local and Tribal agencies, and, as appropriate, nongovernment organizations.

- b. Attachment 3, Emergency Management Core Program. Each DOE and NNSA site, facility, and activity must establish and maintain an emergency management program that complies with the Emergency Management Core Program requirements.
 - c. Attachment 4, Emergency Management Hazardous Materials Program. Each DOE and NNSA site, facility, and activity containing hazardous materials, which were not screened out by the hazardous materials screening process in Attachment 3, will establish and maintain an Emergency Management Hazardous Materials Program.
 - d. Attachment 5, Secure Transportation Program. Each element of the NNSA Office of Secure Transportation will establish and maintain an emergency management program that complies with this attachment.
 - e. Attachment 6, National Response Support. This attachment details planning, preparedness, and response actions the Department will take to fulfill its responsibilities to provide analysis and recommendations for mitigating potential energy supply crises, economic impacts, widespread energy distribution interruptions, fossil fuel distribution, and energy infrastructure recovery advice. The Department also recognizes that assistance may be required in support of a Presidentially-declared emergency invoking the Stafford Act, as amended, and implemented through the National Response Framework, whereby Departmental resources are deployed in support of Federal interagency plans; international agreements; Presidential direction; and State, local, and Tribal agreements of mutual aid.
5. RESPONSIBILITIES. See Appendix A.
6. IMPLEMENTATION.
- a. Full compliance with this Order, including the appendices and attachments, must be accomplished within one (1) year of the issuance date.
 - b. Full compliance with subsequent changes and revisions, including the appendices and attachments, must be accomplished within one (1) year of the issuance date of the change or revision.
 - c. If compliance cannot be accomplished within one (1) year, an implementation schedule must be submitted to the Associate Administrator, Office of Emergency Operations, through the appropriate Program Secretarial Officer, prior to the deadlines stated in 6.a and 6.b.

7. REFERENCES.

- a. Title 10 CFR Sections 205.350-353, “Report of Major Electric Utility Systems Emergencies.”
- b. Title 10 CFR Part 830, “Nuclear Safety Management.”
- c. Title 10 CFR Part 835, “Occupational Radiation Protection.”
- d. Title 10 CFR Part 851, “Worker Safety and Health Program.”
- e. Title 29 CFR Part 1904, “Recording and Reporting Occupational Injuries and Illnesses.”
- f. Title 29 CFR Part 1910, “Occupational Safety and Health Standards.”
- g. Title 29 CFR Part 1960, “Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters.”
- h. Title 36 CFR Part 1236, “Electronic Records Management.”
- i. Title 40 CFR Part 98, “Mandatory Greenhouse Gas Reporting.”
- j. Title 40 CFR Part 110, “Discharge of Oil.”
- k. Title 40 CFR Part 302, “Designation, Reportable Quantities, and Notification.”
- l. Title 40 CFR Part 355, “Emergency Planning and Notification.”
- m. Title 49 CFR Parts 106-180, 200-250, and 350-399, “Transportation.”
- n. DOE Energy Facilities Contractor Group (EFCOG), *Electrical Severity Measurement Tool*, Revision 3, October 2012.
- o. DOE G 420.1-1A, *Nonreactor Nuclear Safety Design Guide for Use with DOE O 420.1C, Facility Safety*, dated 12-4-2012.
- p. DOE O 210.2A, *DOE Corporate Operating Experience Program*, dated 4-8-11.
- q. DOE O 225.1B, *Accident Investigations*, dated 3-4-11.
- r. DOE O 226.1B, *Implementation of Department of Energy Oversight Policy*, dated 4-25-11.
- s. DOE O 232.2, *Occurrence Reporting and Processing of Operations Information*, Change 1, dated 3-12-14.
- t. DOE O 243.1B, Change 1, *Records Management Program*, dated 7-8-2013.

- u. DOE O 420.1C, *Facility Safety*, dated 12-4-12.
- v. DOE O 422.1, Change 2, *Conduct of Operations*, dated 12-3-14.
- w. DOE O 458.1, Change 3, *Radiation Protection of the Public and the Environment*, dated 1-15-13.
- x. DOE O 460.1C, *Packaging and Transportation Safety*, dated 5-14-10.
- y. DOE O 461.1B, *Packaging and Transportation for Offsite Shipment of Materials of National Security Interest*, dated 12-20-10.
- z. DOE STD-1098-2008, *Radiological Control*, dated October 2008, Change Notice 1, dated May 2009
- aa. DOE-STD-1197-2011, *Occurrence Reporting Causal Analysis*, dated September 2011.
- bb. DOE-STD-1066-2012, *Fire Protection*, dated December 2012.
- cc. DOE-STD-7501-99, *The DOE Corporate Lessons Learned Program*, dated December 1999.
- dd. Executive Order 12148, *Federal Emergency Management*, dated 7-20-79, as amended.
- ee. Executive Order 12333, *United States Intelligence Activities*.
- ff. Executive Order 12344, *Naval Nuclear Propulsion Program*.
- gg. Executive Order 12472, *Assignment of National Security and Emergency Preparedness Telecommunications Functions*, dated 4-3-84, as amended.
- hh. Executive Order 12656, *Assignment of Emergency Preparedness Responsibilities*, dated 11-18-88, as amended.
- ii. Executive Order 13286, *Establishing the Office of Homeland Security*, dated 2-28-03.
- jj. HSPD 5, *Management of Domestic Incidents*, dated 2-28-03.
- kk. National Fire Protection Association (NFPA) *Fire Protection Handbook*, Twentieth Edition, 2008.
- ll. National Nuclear Security Administration Supplemental Directive 470.4-1, *Defense Nuclear Security Federal Oversight Process*, dated 4-1-16.
- mm. *National Response Framework*, Department of Homeland Security, dated March 2013.

- nn. *National Infrastructure Protection Plan*, Department of Homeland Security, 2013.
 - oo. Presidential Policy Directive 8, *National Preparedness*, dated 3-30-11.
 - pp. Presidential Policy Directive 21, *Critical Infrastructure Security and Resilience*, dated 2-12-2013.
 - qq. P.L. 80-253, *The National Security Act of 1947*, dated 7-26-47, as amended.
 - rr. P.L. 106-65, *National Defense Authorization Act for Fiscal Year 2000*, dated 10-5-99.
 - ss. P.L. 107-296, *The Homeland Security Act of 2002*, dated 11-25-02.
8. DEFINITIONS. See Attachment 2.
9. CONTACT. For assistance regarding this Order, contact the Associate Administrator, Office of Emergency Operations, at 202-586-9892.

BY ORDER OF THE SECRETARY OF ENERGY:

Logo
inserted
here after
approval

ELIZABETH SHERWOOD-RANDAL
Deputy Secretary

RESPONSIBILITIES

1. DEPUTY SECRETARY, DEPARTMENT OF ENERGY. Serves as the senior Departmental emergency management official; issues, in consultation with the Secretary, emergency management policy and requirements directives; and delegates responsibility and authority as appropriate; establishes, charters, administers, convenes, and chairs the Emergency and Incident Management Council.
2. ADMINISTRATOR, NATIONAL NUCLEAR SECURITY ADMINISTRATION. Serves as the National Nuclear Security Administration (NNSA) senior emergency management program official, and delegates programmatic responsibility and authority as appropriate.
3. ASSOCIATE ADMINISTRATOR, OFFICE OF EMERGENCY OPERATIONS. Serves as the Department's primary administrator for all emergency management program activities.
 - a. Manages, directs, coordinates, and approves the activities, including administrative functions, of the various organization units in the Office of Emergency Operations, NNSA.
 - b. Recommends to the Secretary, through the Administrator, NNSA, proposed rules, regulations, legislation, directives and communications, and develop policy options for the Secretary's consideration on matters within delegated authority.
 - c. Oversees all levels of the Department's emergency management program to ensure activities are conducted in accordance with this Order. Ensures the program provides a comprehensive and integrated approach to emergency management, including planning, preparedness, response, mitigation, and recovery, and reports the results to the Program Secretarial Officers and Field Element Managers for consideration and action as appropriate. For Defense Nuclear Facilities, ensures program performance measures at each organizational level include specific emergency management oversight objectives, areas of attention, and defined assessment frequencies.
 - d. In coordination with the Program Secretarial Officers, provides an annual status report on Departmental readiness assurance to the Secretary, through the Administrator, NNSA.
 - e. Oversees coordination, including communication systems and protocols, of all DOE emergency management related activities, including intra- and inter-Departmental and international activities.

- f. Prepares, manages, and approves interpretations, instructions, and guidance on matters within delegated authority for use by Department elements and contractors.
- g. In coordination with the Program Secretarial Officers, implements and manages programs to ensure the Department emergency management program is executed in accordance with directives, regulations, policies, and applicable laws; to include policies, plans, and procedures for emergency response activities worldwide associated with nuclear weapons programs and facilities, and all radiological and nuclear emergencies on behalf of the United States Government.
- h. Disseminates information, as appropriate, to the Secretary, the Administrator, NNSA, DOE elements, other government agencies, contractors and the public.
- i. Ensures the Secretary, the Administrator, NNSA, Program Secretarial Officers, and the field and site managers are kept fully and currently informed about substantive matters that affect their responsibilities.
- j. Subject to appropriate coordination with relevant offices, enters into, extends, modifies and terminates agreements to which the Office of Emergency Operations, NNSA is a signatory with Federal, State, Tribal and local agencies.
- k. Coordinates, executes, and maintains interoffice agreements to ensure the appropriate resources are maintained in each applicable Program Secretarial Office to effectively execute the Department's emergency management program.
- l. Subject to appropriate coordination with relevant offices, ensures adequate resources are available in the Office of Emergency Operations, NNSA to effectively execute the Department's emergency management program.
- m. Leads the Department's emergency management safety culture efforts in coordination with Program Secretarial Officers.
- n. Performs functions as required, and in accordance with, applicable law, statute, or regulation.
- o. Prepares and issues delegations of authority to Program Secretarial Officers as necessary for the implementation and execution of the specific programs managed by the Office of Emergency Operations, NNSA.
- p. In coordination with the Program Secretarial Officers, implements a concurrence and impasse process to ensure the timeliness of administrative decision making within the delegated area of responsibility.
- q. Establishes, charts, administers, convenes, and chairs the Emergency Management Advisory Committee.

- r. Administers and manages the Emergency Management Enterprise, Headquarters Emergency Operations Center, and Headquarters Emergency Management Team, and serves as the emergency manager for all initial activations of the team.
 - s. In coordination with the relevant offices, develops and maintains the DOE Enterprise Threat and Hazard Risk Profile.
- 4. ASSOCIATE ADMINISTRATOR, OFFICE OF COUNTERTERRORISM AND COUNTERPROLIFERATION.
 - a. Provides a liaison officer to the Secretary of the Department of Homeland Security, or designee, to assist with incident management during a Department of Homeland Security deployment of the response assets.
 - b. Designates and deploys a Senior Energy Official to the emergency location.
 - c. Coordinates, in consultation with the Associate Administrator, Office of Emergency Operations, emergency response asset planning and support provided to Field Elements, other Federal agencies, or to State, local, or tribal governments, to ensure a cohesive Departmental response in the event of an emergency.
 - d. Provides, in consultation with the Associate Administrator, Office of Emergency Operations, Headquarters level programmatic management, direction, and operational integration of the emergency response assets, and serves as the Headquarters point-of-contact for external inquiries regarding the emergency response assets.
 - e. Ensures the interoperability and integrated field response of the emergency response assets, through the development and maintenance of an Asset Operations Integration Plan.
 - f. Designates the Senior Energy Official for nuclear weapon accidents that occur while the nuclear weapon is in DOE or Department of Defense custody.
 - g. Keeps the Associate Administrator, Office of Emergency Operations, apprised of all deployments and on-scene situations where NNSA assets are deployed.
- 5. PROGRAM SECRETARIAL OFFICERS.
 - a. Ensure implementation of emergency management policy and requirements and maintain programs and systems consistent with policy and requirements.
 - b. In consultation with the Associate Administrator, Office of Emergency Operations, and the Associate Administrator, Office of Counterterrorism and Counterproliferation, ensure that budget submissions for sites, facilities and activities, including transportation activities, are adequate for the effective

implementation and maintenance of emergency management programs, emergency response assets and capabilities.

- c. Ensure full coordination with the Associate Administrator, Office of Emergency Operations, and, when necessary, the Lead Program Secretarial Officer and the Cognizant Secretarial Officer, for all emergency management activities.
- d. Designate a round-the-clock single point of contact to receive notifications from the Headquarters Watch Office and make further internal notifications within their Office. Provide specialized technical representatives and subject matter experts when a Headquarters Emergency Management Team is convened.
- e. Coordinate with the Director of Public Affairs and the Associate Administrator, Office of Emergency Operations, to provide for the handling and control of information for emergency situations.
- f. Assign a senior office representative for the Emergency and Incident Management Council and the Emergency Management Advisory Committee.

6. COGNIZANT FIELD ELEMENT MANAGERS.

- a. Implement emergency management policy and requirements and maintain programs and systems consistent with policy and requirements.
- b. In consultation with the Associate Administrator, Office of Emergency Operations, review and approve site, facility, and activity emergency management plans, including updates. Submit the approved plans to the Associate Administrator, Office of Emergency Operations, and the Program Secretarial Officer(s).
- c. In consultation with the Associate Administrator, Office of Emergency Operations, review and approve site, facility, and activity All-Hazards Surveys.
- d. In consultation with the Associate Administrator, Office of Emergency Operations, review and approve site, facility, and activity Emergency Planning Hazards Assessments (EPHAs). Submit the approved EPHAs to the Associate Administrator, Office of Emergency Operations, and the Program Secretarial Officer(s).
- e. In consultation with the Associate Administrator, Office of Emergency Operations, review and approve site, facility, and activity-level consolidated and integrated Emergency Planning Zones and Ingestion Pathway Zones. Submit the approved Zone designations to the Associate Administrator, Office of Emergency Operations, and the Program Secretarial Officer(s).
- f. In consultation with the Associate Administrator, Office of Emergency Operations, ensure appropriate performance measures of the effectiveness of

contractor site, facility, and activity emergency management programs are incorporated into contractual arrangements.

- (1) Assess the Cognizant Field Element emergency management program annually and document the results of the self-assessment in the Cognizant Field Element portion of the Emergency Readiness Assurance Plan (ERAP).
 - (2) Assess the site, facility, and activity emergency management program(s) and provide the results to the Associate Administrator, Office of Emergency Operations, and the Program Secretarial Officer(s).
 - (3) Review site, facility, and activity self-assessment reports.
 - (4) Review and approve the annual site, facility, and activity exercise plan, and submit to the Associate Administrator, Office of Emergency Operations, and the Program Secretarial Officer(s).
 - (5) Review and approve site, facility, and activity Corrective Action Plans for external findings identified during evaluations, assessments, drills, exercises, and actual emergencies. Based on site, facility, and activity performance, periodically review Corrective Action Programs for internal findings to ensure programmatic effectiveness.
 - (6) Review and approve the annual site, facility, and activity ERAPs; prepare the Cognizant Field Element annual ERAP; and submit the ERAP by November 30 each year to the Program Secretarial Officer(s) and the Associate Administrator, Office of Emergency Operations, for inclusion into the annual report on the status of the Emergency Management System and the DOE Enterprise Threat and Hazard Risk Profile.
- g. Coordinate with the Program Secretarial Officer(s) to ensure resources are available to implement this Order for cognizant sites, facilities, and activities.
- h. Ensure development and implementation of appropriate emergency management procedures.
- i. Ensure emergency public information planning is integrated with the development and maintenance of emergency management plans.
- j. Ensure effective communication systems and protocols are coordinated and maintained with the Headquarters Emergency Operations Center regarding emergencies involving and/or affecting sites, facilities, and activities or materials under DOE/NNSA jurisdiction or requiring DOE/NNSA assistance.
- k. Where applicable, pre-designate a DOE/NNSA employee as the On Scene Coordinator when DOE/NNSA is the lead agency for Federal responses under the

National Oil and Hazardous Substances Pollution Contingency Plan or its replacement.

- l. Where applicable, pre-designate a DOE/NNSA employee to respond to and exercise federal decision making authority for each site, facility, and activity in the event of an Operational Emergency.
 - m. In consultation with the Associate Administrator, Office of Emergency Operations, participate in the development and implementation of mutual assistance agreements with State, Tribal, and local authorities.
 - n. Ensure Cognizant Field Element personnel and site, facility, and activity personnel participate in a continuing emergency preparedness program of training, drills, and exercises.
 - o. During an emergency, conduct appropriate and necessary emergency actions in accordance with approved plans and implementing procedures.
 - p. Implement corrective actions and lessons learned from actual emergency responses and based on findings from evaluations, assessments, and appraisals.
 - q. For Emergency Management Hazardous Materials Programs, establish and maintain a cognizant field office Emergency Operations Center to support emergencies if the field office is not collocated with the site, facility, or activity. To maintain continuous operations, an alternate EOC must be identified.
 - r. Assign senior Field Element representatives to the Emergency Management Advisory Committee.
 - s. Identify a senior official who serves as an emergency manager with decision-making authority and responsibilities. This individual must be supported by personnel with communications, technical liaison, and public affairs expertise.
 - t. Effectively integrate the activities of leased facilities and Nuclear Regulatory Commission licensed facilities into the DOE/NNSA site-wide emergency management program. These DOE-owned leased facilities within a DOE Site must comply with applicable requirements of this order. At a minimum, the lease arrangements must include a description of how each of the lessee's emergency management program elements is integrated into the site-wide program, and must also include a requirement that tenant hazardous material inventories be reported to the site emergency management organization annually or when inventories change.
7. INITIATORS OF PROCUREMENT REQUESTS. Specify in procurement requests whether the requirements in the Contractor Requirements Document for this Order are to be applied to the award or sub-award resulting from the procurement request.

8. DIRECTOR, HEADQUARTERS OFFICE OF MANAGEMENT. Develops and maintains the Headquarters Emergency Program and necessary plans and implementing procedures.
9. DIRECTOR, HEADQUARTERS OFFICE OF PUBLIC AFFAIRS. In coordination with the NNSA Associate Administrator for Public Affairs, develops and maintains the Headquarters Emergency Public Information Plan and necessary implementing procedures. Provides copies of the plan to the Program Secretarial Officers and the Associate Administrator, Office of Emergency Operations.
10. ASSISTANT DEPUTY ADMINISTRATOR. Acts for the Deputy Administrator to coordinate and manage the Transportation Safeguards System for the safe and secure movement of nuclear weapons and all government-owned Special Nuclear Material.
11. COMMAND CHIEF. For Office of Secure Transportation activities, the Agent Operations Command Chief is responsible for the operational planning, coordinating, scheduling and executing of resources used in the distribution and transportation of weapons, weapon components, Special Nuclear Material, and other special operations, as required by the Office of Secure Transportation. The Command Chief is responsible for the continuing Federal Agent qualification programs and unit training as well as the day-to-day operations of the Federal Agent Facility.
12. CONVOY COMMANDER. For Office of Secure Transportation activities, independently leads a sizeable contingent of highly specialized forces responsible for the safe and secure transportation of sensitive nuclear material owned or controlled by DOE.

POWER MARKETING ADMINISTRATION EMERGENCY MANAGEMENT PROGRAM

1. PURPOSE. This Appendix establishes emergency management policy and requirements for emergency planning, preparedness, readiness assurance, and response for the Department of Energy (DOE) Power Marketing Administrations (PMAs). This Appendix clarifies requirements for specific application to PMAs and is compatible with emergency preparedness and disaster reporting requirements of the electric utility industry.
2. APPLICABILITY.
 - a. DOE Elements.
 - (1) The provisions of this Appendix apply to all PMAs (Bonneville Power Administration, Southeastern Power Administration, Southwestern Power Administration, and Western Area Power Administration).
 - (2) The Office of Emergency Operations within the National Nuclear Security Administration (NNSA) and the Office of Public Affairs have limited responsibilities in coordinating emergency management with the PMAs.
 - b. DOE Contractors. This Appendix does not apply to contractors.
 - c. Exclusions. Except for the DOE elements listed in paragraph 3a, all other DOE elements are excluded.
3. REQUIREMENTS.
 - a. Background.
 - (1) PMAs operate and maintain electric power transmission systems and market electric power in 37 states. The Bonneville, Southwestern, and Western Area Power Administrations operate and maintain electrical transmission facilities. The Southeastern Power Administration has only power marketing responsibilities.
 - (2) PMAs provide wholesale electrical power in coordination with the North American Electric Reliability Council (NERC) and the appropriate regional councils within NERC.
 - (3) PMAs have unique requirements because their primary energy infrastructure mission is different from other DOE facilities.
 - (4) PMAs respond to Operational Emergencies and Energy Emergencies and provide Emergency Assistance. Operational Emergencies include natural

phenomena (e.g., earthquakes, tornadoes), wild land fires, and other serious events involving or affecting the facility or having potential to have serious impacts on health and safety, electric reliability, the environment, safeguards, and security. Energy Emergencies include all actions taken to ensure the balance generation and load to ensure reliability of the electric interconnection. This impacts continuity of PMA business objectives and operations. Emergency Assistance includes PMA offers of resources to support other electric utilities, a State or local authority or other government agencies in emergency response.

b. All-Hazards Survey/Hazards Assessment.

- (1) All-Hazards Survey. See Attachment 3, Emergency Management Core Program.
- (2) Emergency Planning Hazards Assessment. See Attachment 4, Emergency Management Hazardous Materials Program.

c. Program Administration.

- (1) An individual must be designated to ensure the development and maintenance of the emergency plan and procedures, development of the emergency readiness assurance plan (ERAP), development and conduct of training and exercise programs, coordination of self-assessment activities, development of related facility documentation, and coordination of facility emergency resources.
- (2) The emergency plan must document the emergency management program, including provisions for response to an Operational Emergency.
- (3) Emergency plan implementing procedures must describe how emergency plans will be implemented.
- (4) Emergency plans and procedures must—
 - (a) clearly state roles, responsibilities, and requirements associated with program administration, individual positions, operations, and interfaces, and
 - (b) be reviewed annually and updated as necessary.
- (5) An Emergency Operating Records Protection Program must be established to ensure that vital records, regardless of media, essential to the continued functioning or reconstitution of an organization during and after an emergency, are available, per Title 36 Code of Federal Regulations (CFR) 1236, *Electronic Records Management*.

d. Training and Drills.

- (1) Training must be provided to all onsite workers who may be required to take protective actions (e.g., assembly, evacuation). This training is required upon initial employment. Refresher training must be provided when plans, procedures, systems/equipment, or their expected protective actions change. Refresher training must also be provided annually to those workers who are likely to witness a hazardous material release and who are required to notify proper authorities of the release.
- (2) Emergency-related information and training on facility-, activity-, and site-specific conditions and hazards must be offered to offsite emergency response personnel and organizations, including hospitals, that are expected to support onsite response efforts.

e. Exercises.

- (1) At a minimum, each site/facility must conduct building evacuation exercises consistent with Federal regulations (e.g., 41 CFR 102-74-360, *What are the Specific Accident and Fire Prevention Responsibilities of Occupant Agencies?*), local ordinances, or appropriate National Fire Protection Association Standards. Exercises must be conducted no less than annually to ensure that employees are able to safely evacuate their work area.
- (2) For each facility or activity, the organization responsible for communications with DOE Headquarters and/or offsite agencies must test communications systems annually or as often as needed to ensure that communications systems are operational.

f. Readiness Assurance.

- (1) Self-Assessment. Each PMA must assess its emergency management program annually and record the results of the self-assessment in the ERAP.
- (2) Corrective Actions. These requirements supplement those in DOE O 414.1D, *Quality Assurance*. Continuous improvement in the emergency management program results from implementation of corrective actions for findings (e.g., deficiencies, weaknesses) in all types of evaluations, including both internal and external evaluations.
 - (a) Corrective action plans for external evaluations must be developed within 30 working days of receipt of the final evaluation report.
 - (b) Corrective actions must be completed as soon as possible.

- (c) Corrective actions addressing revision of procedures or training of personnel should be completed before the next annual self-assessment of the program.
 - (d) Completion of corrective actions must include a verification and validation process, independent of those who performed the corrective action, that verifies that the corrective action has been put in place, and validates that the corrective action has been effective in resolving the original finding.
 - (3) Lessons Learned. The readiness assurance program must include a system for incorporating and tracking lessons learned from training, drills, actual responses, and a PMA-wide lessons learned program.
 - (4) Emergency Readiness Assurance Plan. Each PMA must prepare and submit an ERAP, summarizing its programs, to the Associate Administrator, Office of Emergency Operations, by November 30 of each year. This report must identify what the goals were for the fiscal year that ended and the degree to which these goals were accomplished. This report must also identify the goals for the next fiscal year.
- g. Emergency Response Organization. An individual (e.g., building or facility manager or similar position) must be assigned and trained to manage and control all aspects of the facility/activity response.
- h. Offsite Response Interfaces. If applicable, prior to and during emergencies, coordination must be maintained with State, Tribal, and local agencies and organizations responsible for offsite emergency response (e.g., “911” emergencies) and for protection of public health and safety.
- i. Emergency Categorization and Classification.
 - (1) Facility-specific criteria/means/indicators to recognize abnormal events or conditions as Operational Emergencies must be developed. The definition of an Operational Emergency is found in Attachment 3. Specific criteria must be developed for the spectrum of emergency conditions identified in the All-Hazards Survey or the Emergency Planning Hazards Assessment, if necessary.
 - (2) An event must be categorized as an Operational Emergency as promptly as possible, but no later than 15 minutes after event recognition.

- (3) In addition to Operational Emergencies, PMAs must categorize electrical emergencies as described in 10 CFR 205.350, *Report of Major Electric Utility Emergencies*.

j. Notifications and Communications.

- (1) Notifications for electrical emergencies must be conducted in accordance with 10 CFR 205.350 and applicable DOE Orders and Manuals.
- (2) Each facility and activity must establish procedures for prompt initial notification of other Operational Emergencies to workers, emergency response personnel, and response organizations, including, as appropriate, DOE or NNSA elements and other Federal, tribal, State, and local organizations. Provisions must also be established for continuing effective communication among response organizations throughout an emergency.
 - (a) The PMA must notify DOE Headquarters Watch Office as promptly as possible but no more than 30 minutes after an event has been categorized as an other operational emergency.
 - (b) As appropriate, other applicable Federal, Tribal, State, and local organizations are notified as promptly as possible, but no more than 30 minutes after an event has been categorized as an other Operational Emergency or within an interval established in mutual agreements.
 - (c) At a minimum, notification of other Operational Emergencies to the Headquarters Watch Office must consist of a phone call providing as much information as is known at the time. The same information must be provided by e-mail or a fax either immediately prior to or following the phone call. Information for initial notification includes as much as possible of the following:
 - 1 description of the emergency;
 - 2 date and time the emergency was discovered;
 - 3 damage and casualties;
 - 4 whether the emergency has stopped other facility/site operations or program activities;
 - 5 protective actions taken and/or recommended;
 - 6 potential impacts;
 - 7 agencies involved;

- 8 level of public/media attention; and
 - 9 contact information of the DOE on-scene point of contact.
 - (3) Emergency status updates/situation reports must be forwarded to DOE Headquarters on a continuing basis until the emergency is terminated.
 - (4) Following termination of emergency response, and in conjunction with the Final Occurrence Report (see DOE O 232.2), each activated Emergency Management Team must submit a final report on the emergency response to the Emergency Manager for submission to the Associate Administrator, Office of Emergency Operations.
 - (5) Reporting requirements must be specified during recovery planning.
 - (6) All reports and releases must be reviewed for proprietary information and marked appropriately.
- k. Consequence Assessment. Provisions must be in place to determine the impact of other operational emergencies on workers at PMA facilities.
- l. Protective Actions and Reentry.
 - (1) Plans must be developed for the timely evacuation and/or sheltering of onsite personnel, along with provisions to account for employees after emergency evacuation has been completed.
 - (2) In the event of a facility emergency evacuation, accountability actions must be continued to support ongoing search and rescue activities.
 - (3) Provisions must be in place to protect workers involved in response and cleanup covered by 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response*.
 - (4) Reentry planning must include contingency planning to ensure the safety of reentry personnel, such as planning for the rescue of reentry teams. All individuals involved in reentry must receive a hazards/safety briefing before emergency response activities consistent with Federal, Tribal, State, and local laws and regulations.
- m. Emergency Medical Support. Provisions for response to emergency medical situations and medical treatment of injured personnel must be implemented, as required by 29 CFR 1910.151, *Medical Services and First Aid*. In addition, planning for mass casualty situations must be conducted in accordance with DOE O 440.1B and 10 CFR 851, *Worker Safety and Health Program*. Sharing patient information between onsite and offsite health care providers during emergencies must be coordinated in advance and consistent with the requirements

of the *Health Insurance Portability and Accountability Act*, Title 42 United States Code (USC) 300.

- n. Emergency Public Information.
 - (1) The PMA must provide accurate, candid, and timely information consistent with requirements of the Freedom of Information Act and the Privacy Act to ensure the health and safety of workers and the public during all emergencies and must establish facts, avoid rumors and speculation, and be responsive to public concern and information needs.
 - (2) Procedures must be in place to address media inquiries and, as necessary, conduct briefings or press conferences for other operational emergencies.
 - (3) Initial news releases or public statements must be approved by the PMA official responsible for emergency public information review and dissemination. Following initial news releases and public statements, updates must be coordinated with the Headquarters Emergency Operations Center Public Affairs Watch Officer or the DOE Director of Public Affairs, unless approval is delegated by Headquarters to the PMA.
- o. Emergency Facilities and Equipment. Facilities and equipment must be adequate to support emergency response, including the capability to notify employees of an emergency and to facilitate their safe evacuation from work areas.
- p. Termination and Recovery.
 - (1) Predetermined criteria for terminating emergencies must be established/developed, and the termination must be coordinated with offsite agencies.
 - (2) Recovery must include notifications about the termination and establishment of criteria for resumption of normal operations.
 - (3) The facility and the accident investigation team must coordinate or integrate their activities to facilitate an orderly transition of responsibilities for the emergency scene. [DOE O 225.1B, *Accident Investigation*].
- q. Implementation.
 - (1) Full compliance with the requirements of this Appendix must be accomplished within 1 year of its issuance.
 - (2) If compliance is not or cannot be completed within 1 year from issuance of this Manual, an implementation schedule must be developed by the PMA and submitted to the Associate Administrator, Office of Emergency Operations.

- (3) Non-mandatory implementation guidance for DOE O 151.1D and this Appendix is published separately in the multi-volume DOE G 151.1-1 series of Emergency Management Guides (or replacements). The DOE G 151.1-1 series provides non-mandatory, supplemental information about preferred methods for implementing requirements, including lessons learned, suggested practices, instructions, and suggested performance measures.

r. Exemptions.

- (1) If a DOE element can demonstrate that it is subject to emergency management program requirements under the authority of other Federal regulatory agencies and those requirements are at least as stringent as the requirements of this Appendix, an exemption may be requested.
- (2) Requests for exemptions from the requirements of this Appendix, including specific program element requirements, must include the basis for the request and describe and justify alternatives equivalent to or exceeding this Appendix.
- (3) Requests for exemptions are jointly approved by the PMA Administrator and the Associate Administrator, Office of Emergency Operations, with conflicts resolved by the Deputy Secretary or designated Departmental Chief Operating Officer.
- (4) Each PMA Administrator defines “facility” for the purpose of implementing this Appendix. PMAs may group activities and operations for certain requirements as suits their organizational needs without requesting an exemption.

4. RESPONSIBILITIES.

a. Deputy Secretary or Designated Chief Operating Officer.

- (1) Resolves conflicts when requests for exemptions from the requirements of this Appendix are not agreed to between the PMA and the Associate Administrator, Office of Emergency Operations.
- (2) Other responsibilities are listed in Appendix A.

b. Associate Administrator, Office of Emergency Operations.

- (1) Serves as the primary point of contact for the overall emergency planning and operations activities and termination of emergency responses.
- (2) In coordination with each PMA Administrator, approves requests for exemptions from the requirements of this Manual.

- (3) Other responsibilities are listed in Appendix A.

c. PMA Administrators.

- (1) Due to each PMA's unique enabling legislation and scope of their regional responsibilities, the PMA Administrators are responsible for the development, approval, implementation and management of their individual emergency management programs.
- (2) Designate by name, title, or position a person to manage the PMA emergency management program, receive PMA emergency notifications, participate in any Headquarters response, and attend Headquarters Comprehensive Emergency Management System meetings or planning activities that involve, or may involve, PMAs.
- (3) Establish and maintain integrated plans and procedures detailing responsibilities for emergency response. Ensure that all emergency plans and procedures—
 - (a) are consistent with the requirements of this Appendix, electric utility reliability criteria, and appropriate PMA business objectives and operations;
 - (b) provide support, within resource constraints, to Energy Emergencies and Emergency Assistance;
 - (c) are coordinated with the appropriate Departmental elements and, where applicable, with other Federal agencies; Tribal, State, and local governments; and other utilities;
 - (d) provide for a continuing program of emergency management training, drills, and exercises, including participation of employees as required;
 - (e) provide opportunities for participation by appropriate utilities and local, State, and Tribal organizations in such drills and exercises; and
 - (f) are reviewed and updated at least annually.
- (4) Establish a formal procedure to keep copies of emergency plans, procedures, and associated documents up to date and accessible at locations where they may be needed during an emergency.
- (5) Establish a program to ensure that vital records, regardless of media, essential to the continued functioning or reconstitution of an organization during and after an emergency, are available, per 36 CFR 1236.

- (6) Ensure that supporting mutual assistance agreements are developed with Tribal, State, and local governments and other utilities, where appropriate, and maintained on record.
 - (7) Ensure that immediate emergency response is initiated and followed up with appropriate recovery and restoration activities.
 - (8) Ensure the PMA's Public Affairs Office is part of emergency planning and response.
 - (9) Assess the PMA emergency management program annually and record the results of the self-assessment in the ERAP.
 - (10) Ensure that potential hazards are reviewed and documented for emergency planning purposes.
 - (11) In coordination with the Associate Administrator, Office of Emergency Operations, approve requests for exemptions from the requirements of this Appendix.
- d. DOE Director of Public Affairs and Headquarters Emergency Manager. In accordance with this Appendix as well as the responsibilities in Appendix A, coordinate updates of initial news releases and public statements with the PMAs.

5. REFERENCES.

- a. Title 31 USC 1115 and 1116, Government Performance Results Act.
- b. Title 42 USC 300, Health Insurance Portability and Accountability Act.
- c. Title 10 CFR 205.350, Report of Major Electric Utility Emergencies.
- d. Title 10 CFR 851, Worker Safety and Health Program.
- e. Title 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response.
- f. Title 29 CFR 151, Medical Services and First Aid.
- g. Title 36 CFR 1236, Electronic Records Management.
- h. Title 41 CFR 102-74-360, What are the Specific Accident and Fire Prevention Responsibilities of Occupant Agencies?
- i. DOE O 225.1B, *Accident Investigation*, dated 3-4-11.
- j. DOE O 232.2, Chg 1, Occurrence Reporting and Processing of Operations Information, dated 3-12-14.

- k. DOE O 414.1D, Chg 1, *Quality Assurance*, dated 5-8-13.
- l. DOE O 440.1B, Chg 2, Worker Protection Management for DOE (Including the National Nuclear Security Administration) Federal and Contractor Employees, dated 3-14-13.

CONTRACTOR REQUIREMENTS DOCUMENT
DOE O 151.1D *COMPREHENSIVE EMERGENCY MANAGEMENT SYSTEM*

Regardless of the performer of the work, the contractor is responsible for complying with the requirements of this Contractor Requirements Document (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.

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). See Attachment 3, "Emergency Management Core Program."

In addition to the requirements set forth in this CRD, contractors are responsible for complying with 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.

Contractors may meet the requirements of this order by implementing nationally recognized standards, such as the National Fire Protection Association (NFPA) Standard 1600, "Standard on Disaster/Emergency Management and Business Continuity Programs," with prior approval through the formal equivalency and exemption process; see section 3.c(1) of this order.

DEFINITIONS

This Attachment provides information and/or requirements associated with DOE O 151.1D as well as information and/or requirements applicable to contracts in which the associated Contractor Requirements Document (Attachment 1 to DOE O 151.1D) is inserted.

Active Threat: An active threat incident is a dynamic, quickly evolving situation involving an individual (or individuals) using deadly physical force, such as firearms, bladed weapons, or a vehicle. An active threat incident typically involves an individual (or individuals) presenting an immediate threat or imminent danger to people by displaying a weapon, having made threats, and/or shown intent to cause harm or perform violence.

After Action Report: A report prepared following an exercise or actual event or incident, to document the results of the evaluation to include findings, issues, and improvement items.

Alert: A condition in which an actual or potential substantial degradation in the level of control over hazardous materials exists.

Annual (such as “annual exercise”): At the discretion of the site/facility/activity emergency management program 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.

Assessment: A review, evaluation, inspection, test, check, surveillance, or audit to determine and document whether items, processes, systems, or services meet specified requirements and perform effectively.

Compliance: Conforming to the requirements of DOE O 151.1D, Comprehensive *Emergency Management System* (and, by reference, national laws and regulations).

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.

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.

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.

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.

Effective: Successful in producing a desired or intended result as defined by the Cognizant Field Element Manager.

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 classify a specific type of emergency.

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.

Emergency Assistance Plan: A plan for providing assistance for all activities whereby Departmental resources, emergency response assets, personnel, and/or facilities may be deployed in support of Federal interagency plans; international agreements; Presidential direction; and State, local, or Tribal agreements of mutual aid.

Emergency Communication System (ECS): A system for the protection of life by indicating the existence of an emergency situation and communicating information necessary to facilitate an appropriate response and action. Emergency Communication Systems are classified as either one-way or two-way systems.

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 site/facility/activity. Examples of an ENS include intelligible voice communications, a distributed recipient mass notification system such as text messaging, email, or Reverse 911, and/or common siren systems that are used to alert for tornadoes, tsunamis, and air-raids.

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.

Emergency Operating Records: Records essential to the continued functioning or reconstitution of an organization during and after an emergency or continuity event.

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.

Emergency Planning Hazards Assessment (EPHA): An quantitative analysis identifying hazards and the potential consequences from unplanned releases of (or loss of control over) hazardous materials, using accepted assessment techniques.

Emergency Planning Zone (EPZ): A zone identified to facilitate a pre-planned strategy for protective actions during a defined emergency.

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.

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

Energy Emergency: An emergency resulting from an energy supply crises, economic impacts, widespread energy distribution interruptions, and/or energy infrastructure damage.

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.

Event: A scheduled nonemergency activity (e.g., weather event, demonstration, high risk evolution, 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.

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 (examples include drills, functional exercises, and full-scale exercises).

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.

Full Participation Exercises (FPEs): Exercises similar to a Full-Scale Exercise except that offsite elements are required to be invited to participate. 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.

Functional Exercise: 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.

General Emergency: 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 applicable Protective Action Criterion at or beyond the site boundary.

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.

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.

Hazardous Material: Any hazardous biological agents and toxins; solid, liquid, or gaseous material that is toxic; explosive, flammable, or corrosive, radioactive ; and radiological material., contains ionizing radiation, or otherwise could adversely affect the health and safety of the public or the workers or harm the environment.

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.

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, tropical storms, 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.

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.

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.

Ingestion Planning Zone (IPZ): The radius from the source of a release where protective actions are taken to avoid or reduce exposure due to ingestion to include ban of the use of water and food sources.

Joint Information Center (JIC): A working location, where multiple jurisdictions gather, process, and disseminate public information during an emergency.

Jurisdictional Agency: The agency having statutory responsibility for a specific geographical area, or a mandated function, during an incident. Jurisdictional authority at an incident can be political/geographical (e.g., city, county, Tribal, state, or Federal boundary lines) or functional (e.g., law enforcement, public health).

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 site/facility/activity. The incident produces more patients than the responding jurisdiction is *routinely* capable of handling, and necessitates an uncommon level of mobilization of resources.

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. Mitigation activities take place both before emergency incidents (e.g., clearing brush to mitigate wildland fires), during, and after emergency incidents (e.g., containing a hazardous material spill, isolating a process).

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.

National Security Area (NSA): A DOE-controlled area established by DOE for radiological incidents involving a nuclear weapon, special nuclear material, and/or classified components that are in DOE custody, for example during a Secure Transportation activity. DOE will coordinate with State and local officials to ensure appropriate public health and safety actions are taken

outside the NSA. DOE will lead the overall response to safeguard National Security Information and/or Restricted Data, or equipment and material. DOE may also include lands normally not under DOE control as part of the established NSA for the duration of the incident.

Nuclear Facility: A reactor or a nonreactor nuclear facility where an activity is conducted for or on behalf of DOE and includes any related area, structure, facility, or activity to the extent necessary to ensure proper implementation of the requirements established by 10 Code of Federal Regulations 830, *Nuclear Safety Management*.

Operational Emergency: For all activities except Office of Secure Transportation (OST) activities, the following definition applies:

- A major unplanned or abnormal incident 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 and requires additional resources to supplement the planned initial response offsite; and

For non-OST DOE/NNSA offsite shipments:

- Any accident/incident involving an offsite DOE/NNSA shipment containing hazardous materials that causes the initial responders to initiate protective actions at locations beyond the immediate/affected area.

For Secure Transportation activities:

The incidents or conditions listed below represent an actual or potential release of hazardous materials from an Office of Secure Transportation (OST) shipment, or a major security incident without a hazardous materials release, and will be classified as an Operational Emergency per in accordance with this Order. OST will not further classify an Operational Emergency. These incidents/conditions include:

- A terrorist attack or other criminal act involving an OST transportation mission that requires the deployment of OST security assets at the emergency scene.
- 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.
- Failures in safety or security systems that threaten the integrity of a nuclear weapon, component, or test device.
- A transportation accident resulting in damage, or potential damage, to a nuclear explosive, nuclear explosive-like assembly, or Category I/II quantity of Special Nuclear Material.

Aviation operational emergencies can include overdue aircraft, missing aircraft, and incident scenarios at or near a civilian or government aviation facility.

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.

Proficiency: Demonstrated skill and competency acquired from training and experience.

Protective Actions: Actions taken to minimize the consequences of emergencies and to protect the health and safety of workers and the public. Protective actions must be implemented individually or in combination to reduce exposures to a wide range of hazardous materials.

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.

Public Information Officer (PIO): The PIO is the individual responsible for communicating with the public, media, and/or coordinating with other agencies, as necessary, with incident related information requirements. The PIO is responsible for developing and releasing information about the incident to the news media, incident personnel, and other appropriate agencies and organizations. Depending on the size or complexity of the incident, a lead PIO should be assigned for each incident and may have assistants, as necessary, including supporting PIOs representing other responding agencies or jurisdictions.

Radiological emergency response assets: The collective group of capabilities available to provide technical and operational assistance for any type of nuclear or radiological accident or incident. These DOE/NNSA assets can be deployed to assist at an emergency at any DOE or NNSA site, or anywhere domestically or internationally. The assets deploy to the field and are supported by Home Teams for radiological search, stabilization, render safe, and consequence management technical operations. Asset expertise includes radiation measurements, modeling, and technical analysis and assessments related to nuclear and radiological operations.

Recommendation: Suggestions for senior line management's consideration for improving program or management effectiveness. Recommendations transcend the specifics associated with findings, deficiencies, or opportunities for improvement and are derived from the aggregate consideration of the results of the appraisal.

Recovery: The phase of activity that follows termination of an emergency. The recovery period begins when emergency response is declared terminated, but recovery actions can proceed before the response is declared terminated. The recovery phase continues until the objectives of the recovery effort have been met.

Reentry: The prioritized actions required to return processes and support functions to operational stability following an interruption or emergency.

Senior Federal Official: A senior management federal personnel, designated by the Cognizant Field Element Manager, assigned to the EOC in his/her capacity with decision-making authority and responsibilities.

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

Severe Incident: An incident expected to cause major disruptions/damage to site-wide and offsite infrastructure, as well as, increased risk to onsite personnel, possibly resulting in injuries and fatalities. These incidents could potentially isolate a facility or site from onsite/offsite response assistance and infrastructure support.

Shutdown: Placing a facility in those conditions specified in facility technical specifications as standbys or shutdown, as appropriate.

Site Area Emergency: A condition in which 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 the facility boundary. The Protective Action Criterion is not expected to be exceeded at or beyond the site boundary.

Strategic Partnership Project (formerly Work for Others): Work for non-DOE entities by DOE/NNSA and/or their contractors or use of DOE/NNSA facilities for work that is not directly funded by DOE/NNSA appropriations

Termination: The declared conclusion of an Operational Emergency.

Visitor: An onsite individual who is not an employee, or contractor, or subcontractor of the site/facility/activity.

Walk-Away: A strategy employed during an emergency as an alternative to Shutdown, whereby a facility is placed in a safe condition requiring no further on-scene operator action, allowing operations personnel to safely leave the facility until a planned reentry can be made.

Worker: Employees (Federal, contractor, or subcontractor) who are onsite.

EMERGENCY MANAGEMENT CORE PROGRAM

This Attachment provides information and/or requirements associated with DOE O 151.1D as well as information and/or requirements applicable to contracts in which the associated Contractors Requirement Document (Attachment 1 to DOE O 151.1D) is inserted.

Each DOE, including the National Nuclear Security Administration (NNSA), site, facility, and activity must establish and maintain an emergency management program that complies with the Emergency Management Core Program requirements.

1. **PROGRAM ADMINISTRATION AND MANAGEMENT.** Program administration and management must be established to provide effective organizational management and administrative control of the site/facility/activity 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. DOE/NNSA sites/facilities/activities 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 site/facility/activity-level resources and operations;
 - (3) brief 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;
 - (4) ensure emergency management planning is integrated with other applicable programs and associated documents (e.g., Baseline Needs Assessment, Site Security Plan, Cybersecurity Plan, and Continuity of Operations Plan);
 - (5) oversee implementation of the emergency management plan in accordance with the requirements of this Order;
 - (6) approve and/or concur on planning documents addressing the program elements listed below in paragraph 1.a.(7); and
 - (7) ensure the emergency management program addresses the elements of the Emergency Management Core Program.
 - (a) Program Management and Administration
 - (b) All-Hazards Planning Basis

- (c) Emergency Response Organization
 - (d) Emergency Operations System
 - (e) Training and Drills
 - (f) Emergency Medical Support
 - (g) Offsite Response Interfaces
 - (h) Emergency Categorization
 - (i) Protective Actions
 - (j) Emergency Facilities and Equipment
 - (k) Notifications and Communications
 - (l) Emergency Public Information
 - (m) Termination and Recovery
 - (n) Readiness Assurance
 - (o) Consequence Assessment
- b. In addition to the requirements of the Emergency Management Core Program, implement the emergency management program requirements contained in Attachments 4, 5, and 6 of this Order for those sites/facilities/activities to which they apply.
- (1) Attachment 4, Emergency Management Hazardous Material Program. This attachment contains additional requirements for sites/facilities/activities with hazards that are not screened out by the Hazardous Materials Screening process [Attachment 3, 2.b.(6)].
 - (2) Attachment 5, Secure Transportation. This attachment contains specific emergency management program requirements for the activities performed by the Office of Secure Transportation.
 - (3) Attachment 6, National Response Support. This attachment contains requirements for the Departmental elements supporting national energy emergency response and all-hazards incident national level response as reflected in the Energy Emergency and Emergency Assistance Programs, respectively.

- c. Develop and maintain an all-hazards emergency management plan. The emergency management plan must be –
 - (1) reviewed and documented annually, and updated 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 Cognizant Field Element Manager or appropriate Federal Manager for approval.
- d. Develop and maintain procedures that describe how the emergency management plan must be implemented and maintained.
- e. Use a controlled document system for the emergency management plan and related procedures and documentation.
- f. Identify a process for review, approval, and distribution of the emergency management plan and related procedures and documentation.
- g. Develop and maintain agreements for the transport, acceptance, and treatment of potentially contaminated injured personnel, as applicable (see paragraph 6 of this Attachment).
- h. Address interoperability, integration, and interface with jurisdictional responders for severe incidents with regional impacts.
- i. Review emergency management documents for classified information and Controlled Unclassified Information.
- j. Identify and maintain emergency operating vital records in accordance with 36 Code of Federal Regulations (CFR) Part 1236, *Electronic Records Management*.

2. ALL HAZARDS PLANNING BASIS.

- a. All-Hazards Survey. An All-Hazards Survey must be performed by DOE/NNSA sites/facilities/activities. Its purpose is to identify all hazards that are applicable to the operation of that entity and establishes the planning basis for the emergency management program. Each All-Hazards Survey must address the following.
 - (1) Describe the applicable potential health, safety, or environmental impacts;
 - (2) Identify the need for development of further planning and preparedness beyond the Emergency Management Core Program requirements that will apply to each type of hazard;
 - (3) Be submitted for approval to the Cognizant 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/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 an Unreviewed Safety Question for nuclear facilities, as defined in 10 CFR 830, or in an Unreviewed Safety Issue for accelerator facilities, as defined in DOE O 420.2C, *Safety of Accelerator Facilities*. 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.

- (4) May cover multiple facilities and activities, and one All-Hazards Survey may cover an entire site.
- (5) Performing an All-Hazards Survey. The All-Hazards Survey is conducted to determine applicable hazards and threats that are plausible for each site. The All-Hazard Survey must:
 - (a) Address the following.
 - 1 Natural hazards, which result from acts of nature, such as hurricanes, earthquakes, tornadoes, animal disease outbreak, pandemics, or epidemics.
 - 2 Technological hazards, which result from accidents or the failures of systems and structures, such as hazardous materials releases, or dam failures.
 - 3 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.
 - (b) Include 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*. Conduct this analysis using the CPG to identify potential hazards, threats, capability targets, and resources. The THIRA template (Appendix A of the CPG) shall be used to document and maintain the assessment.
 - 1 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.

- 2 Using this information, the Office of Emergency Management must prepare a DOE Enterprise Threat and Hazard Risk Profile.
 - (c) Associate Administrator, Office of Emergency Operations must prepare a DOE Enterprise Threat and incorporates analyses and assessment information required in other applicable DOE directives (e.g., Baseline Needs Assessment, safety basis documents, etc.).
 - (d) For severe events consider the reliance on local/regional offsite responders, and make considerations for how the site/facility/activity will handle severe incidents if these response resources are not available.
- (1) Hazardous material screening process. Categories to be considered under the All-Hazards Survey include sites/facilities/activities with radiological materials, hazardous biological agents and toxins, and toxic hazardous chemicals. A process flow diagram shows this process in Figures 3-1 to 3-5. Table 3-1 provides the screening thresholds in a tabular format.
 - (a) All hazardous materials (i.e., radiological, biological agent/toxin, chemical, and explosive) at a DOE/NNSA site must be considered in the screening.
 - 1 If the hazardous material at a site/facility/activity screens out by quantity or by exclusion from the screening – as described in paragraphs 2.b.(6).(c) through 2.b.(6).(h) – response plans must still be developed in accordance with paragraph 2.b.(6).(b) below to address smaller scale incidents and emergencies.
 - 2 If the hazardous material at a site/facility/activity does not screen out, and is not covered by the exclusions below, an Emergency Planning Hazards Assessment (EPHA) must be conducted. See Attachment 4, Emergency Management Hazardous Materials Program.
 - (b) Notwithstanding whether a hazardous material screens out based on the thresholds and exclusions, there is a general duty for DOE/NNSA sites/facilities/activities to –
 - 1 identify by using appropriate hazard information, assessment techniques and tools (e.g., Safety Data Sheets, Environmental Protection Agency (EPA) Computer-Aided Management of Emergency Operations, Department of

Transportation Emergency (DOT) Response Guidebook, etc.) the consequences that may result from accidental releases of hazardous materials;

- 2 design, maintain, and operate a safe facility, taking such steps as are necessary to prevent releases;
- 3 minimize through appropriate emergency planning the consequences of accidental releases, which might occur; and
- 4 consider the possibility that excluded materials could initiate, through fires or explosions, the release of collocated or hazardous materials in adjacent facilities.

If, based on the assessment process in (b).1 and the professional judgment of the person(s) performing and approving the survey, additional analysis and planning is warranted in order to accomplish (b).3 in a facility, an EPHA is to be performed and the facility required to comply with the Emergency Management Hazardous Materials Program (Attachment 4).

- (c) If the screening is being performed for individual facilities, and the containers are not connected and are not physically in one location, then each container and its associated process should be evaluated separately. If separated containers are connected by process piping, if a credible common event (e.g., fire, loss of containment, cascading effects, etc.) in one facility could cause the material to be released from more than one container, then the total quantity of that hazardous material should be used to determine if it exceeds the applicable screening threshold.

1 Exclusions.

- a 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).
- b 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, and liquids with a vapor pressure, at

standard temperature under conditions of storage, of <10 mmHg.

- c Radioactive materials that may be excluded include: sealed radioactive sources that are engineered to pass the special form testing specified by 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.

- 2 Simple asphyxiants and cryogenic materials may be excluded but will be analyzed in the THIRA.

- 3 Consistent with Federal law, fuel oil and gases (e.g., petroleum, propane, etc.) are excluded in the definition of hazardous materials used in this Order, however, large scale storage inventories must be analyzed in the THIRA and addressed in emergency management planning using appropriate guidance (e.g., National Fire Protection Association, DOT Emergency Response Guidebook, etc.) and the site's Baseline Needs Assessment. This analysis and planning should include consequences with respect to overpressure (e.g., 1 psi) or radiant heat dose (e.g., second-degree burn) exposures from explosions or fires involving these inventories. 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.

(d) Radiological Materials:

- 1 Radioactive materials that require further analysis in an EPHA are those types and quantities associated with a defined Hazard Category 1, 2, or 3 nuclear facility per 10 CFR 830, *Nuclear Safety Management*; specifically those materials contributing to the categorization of such a facility.
- 2 Those materials associated with a facility/activity being defined as an accelerator per DOE O 420.2C, *Safety of Accelerator Facilities*, require further analysis in an EPHA, when in quantities greater than the largest Category 3 value (or if the sum of the ratios exceeds 1) listed in:

- a DOE-STD-1027-92, Hazard Categorization and Accident Analysis Techniques for Compliance with 10 CFR 830, Nuclear Safety Management;
 - b NA-1 SD G 1027, Guidance on Using Release Fraction and Modern Dosimetry Information Consistently with DOE STD 1027-92, Hazard Categorization and Accident Analysis Techniques for Compliance with 10 CFR 830; and
 - c 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.
 - d LA-12981-MS, Table of DOE-STD-1017-92 Hazard Category 3 Threshold Quantities for the ICRP-30 List of 757 Radionuclides, LANL Fact Sheet, 2002.
- (e) Hazardous Biological Agents and Toxins:
 - 1 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 73] and Department of Agriculture regulations [7 CFR 331 and 9 CFR 121].
 - 2 Analyze further in an EPHA if these materials are present.
- (f) Chemicals: The screening thresholds for chemicals are described as follows:
 - 1 Extraordinary toxic hazards. Materials with high acute toxicity and very dispersible, may represent an extraordinary toxic hazard beyond the local incident scene, in quantities greater than one (1) pound (0.45 kg). These substances include, but may not be limited to: chemical warfare nerve agents; any substance of similar toxicity [e.g., 60-minute Acute Exposure Guideline Level (AEGL)-3, Emergency Response Planning Guideline (ERPG)-3, or Temporary Emergency Exposure Limit (TEEL)-3 values less than 3 ppm] that has been “weaponized” or designed for efficient dispersal as a gas, vapor or aerosol.
 - 2 Chemicals in quantities that exceed the lower threshold quantity (TQ) listed in either 40 CFR 68.130 (EPA Risk

Management Program) or 29 CFR 1910.119(a).(1) [Occupational Safety and Health Administration (OSHA) Process Safety Management Program].

- a Chemical material, location, and quantity combinations that screen in for toxic hazard screen in for inclusion in an EPHA.
 - b Chemical material, location and quantity combinations that screen in for flammability concerns without also screening in for toxic hazard under the 40 CFR 68.130 or 29 CFR 1910.119.a.1 specifications must be annotated in the All-Hazards Survey but do not require an additional EPHA.
 - 3 For chemicals not specifically listed above, the TQ is based on the Global Harmonized System (GHS) hazard categorizations. These categorizations can be taken from the manufacturer's Safety Data Sheet, or can be determined from other credible toxicology data sources and compared against the GHS category definitions.
 - a GHS Acute Toxicity Hazard Category 1, greater than 100 pounds (45.4 Kg).
 - b GHS Acute Toxicity Hazard of Category 2 greater than 500 pounds (227 Kg).
 - c GHS Category 1 Skin Corrosion/Irritation or Serious Eye Damage/Eye Irritation, greater than 500 pounds (227 Kg).
 - 4 If an initiating event will cause multiple chemicals to be released, the effects of the mixture or by-products must be evaluated for their acute toxicity, and evaluated against these threshold quantities.
 - 5 Ordinary products of combustion (e.g., carbon monoxide, hydrogen cyanide, etc. that are released in fires involving hydrocarbons, building components, wood, plastic, etc.), are exempt from analysis.
- (g) 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).

(h) Explosives:

- 1 All explosives in a facility/activity must be subjected to a hazardous material screening process to determine if there is a hazardous materials impact (e.g. toxicity, dispersion of other hazardous materials).
- 2 Facility/activity emergency planning, preparedness, and response must take into account the hazards associated with explosives and be consistent with DOE-STD-1212-2012, *Explosives Safety*. A graded approach must be applied based on the explosive's Hazard/Division class.
- 3 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.

Table 3-1. Hazardous material screening thresholds

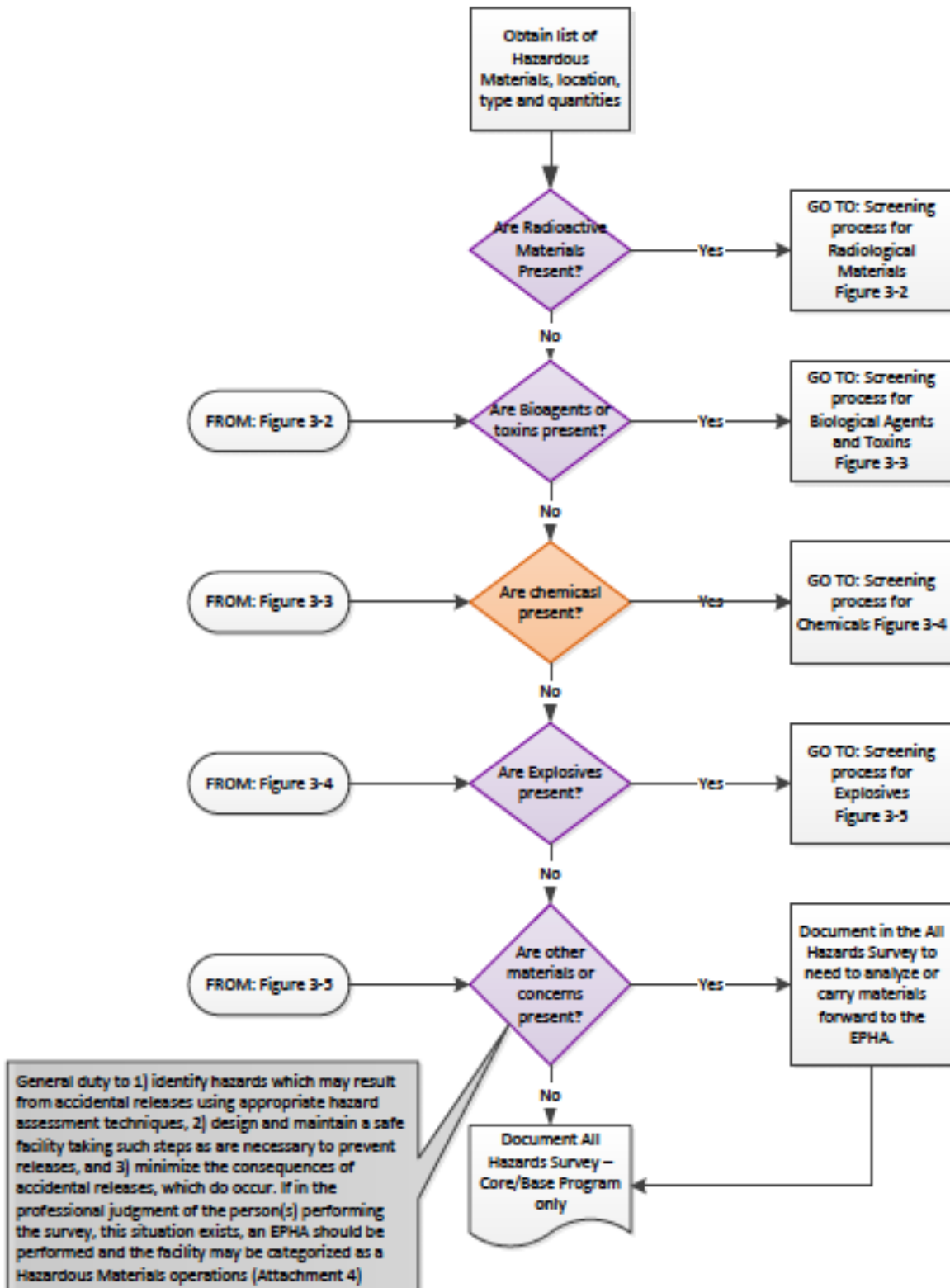
Radiological Materials	Types and quantities associated with a defined Hazard Category 1, 2, or 3 nuclear facility (10 CFR 830); Materials associated with a facility/activity being defined as an accelerator per DOE O 420.2C in quantities greater than the largest Category 3 value ^{1 2}	
Hazardous Biological Agents & Toxins	Federally regulated agents/toxins listed in 42 CFR Part 73, 7 CFR Part 331, and 9 CFR Part 121	
Chemicals	Chemicals in quantities that exceed the lower threshold quantity (TQ) listed in either 40 CFR 68.130 (EPA Risk Management Program) or 29 CFR 1910.119.(a).(1) (OSHA Process Safety Management Program). If a chemical is not listed, then the following screening quantities apply:	
	Public use or non-dispersible materials are excluded from further screening.	
	Categories of chemicals not addressed above:	
	Extraordinary toxic hazards ³	1 pound (0.45 kg)
	GHS Acute Toxicity Hazard Category 1	100 pounds (45.4 kg)
	GHS Acute Toxicity Hazard of Category 2	500 pounds (227 kg)
Other	GHS Category 1 Skin Corrosion/Irritation or Serious Eye Damage/Eye Irritation	500 pounds (227 kg)
	General duty to 1) identify hazards which may result from accidental releases using appropriate hazard assessment techniques, 2) design and maintain a safe facility taking such steps as are necessary to prevent releases, and 3) minimize the consequences of accidental releases, which do occur. If in the professional judgment of the person(s) performing the survey, this situation exists, an EPHA should be performed and the facility may be categorized as a Hazardous Materials operations (Attachment 4)	

¹ from: DOE-STD-1027-92, Hazard Categorization and Accident Analysis Techniques for Compliance with 10 CFR 830, Nuclear Safety Management; NA-1 SD G 1027, Guidance on Using Release Fraction and Modern Dosimetry Information Consistently with DOE STD 1027-92, Hazard Categorization and Accident Analysis Techniques for Compliance with 10 CFR 830; LA-12846-MS, Specific Activities and DOE-STD-1027-92 Hazard Category 2 Thresholds, LANL Fact Sheet; or LA-12981-MS, Table of DOE-STD-1017-92 Hazard Category 3 Threshold Quantities for the ICRP-30 List of 757 Radionuclides, LANL Fact Sheet.

² Where there are combinations of radioactive materials, if the sum of the ratios of the quantity of each material exceeds one, a further analysis in an EPHA is required.

³ substances include, but may not be limited to: chemical warfare nerve agents; any substance of similar toxicity [e.g., 60-minute Acute Exposure Guideline Level (AEGL)-3, Emergency Response Planning Guideline (ERPG)-3, or Temporary Emergency Exposure Limit (TEEL)-3 values less than about 3 ppm] that has been “weaponized” or designed for efficient dispersal as a gas, vapor or aerosol.

Figure 3-1, Hazardous Material Screening Process



Excluded materials include	
•	Sealed radioactive sources that are engineered to pass the special form testing specified by the Department of Transportation (DOT) or the American National Standards Institute (ANSI);
•	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
•	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

Figure 3-2, Radiological Material Screening

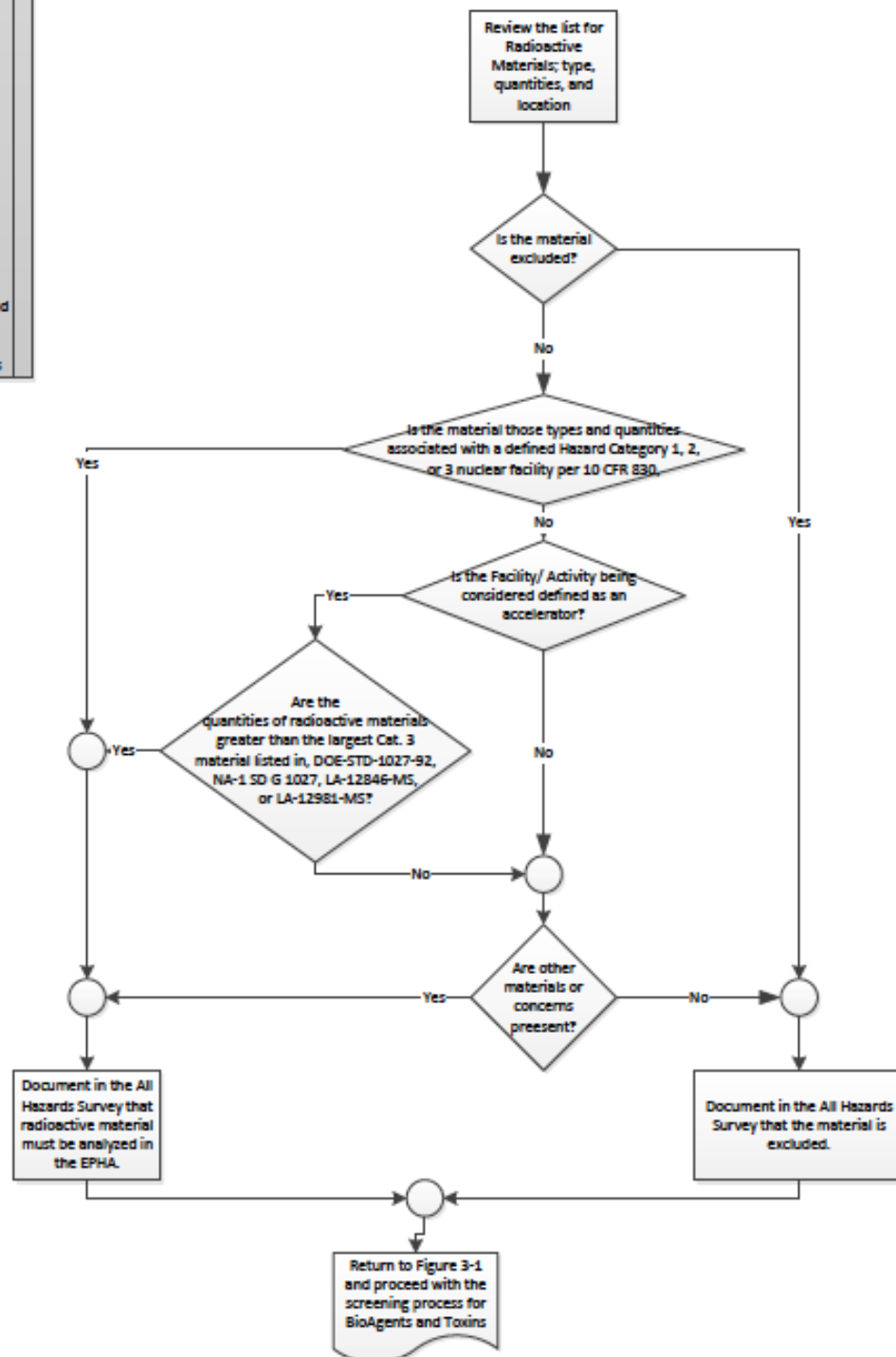


Figure 3-3, Biological Agents and Toxin Screening

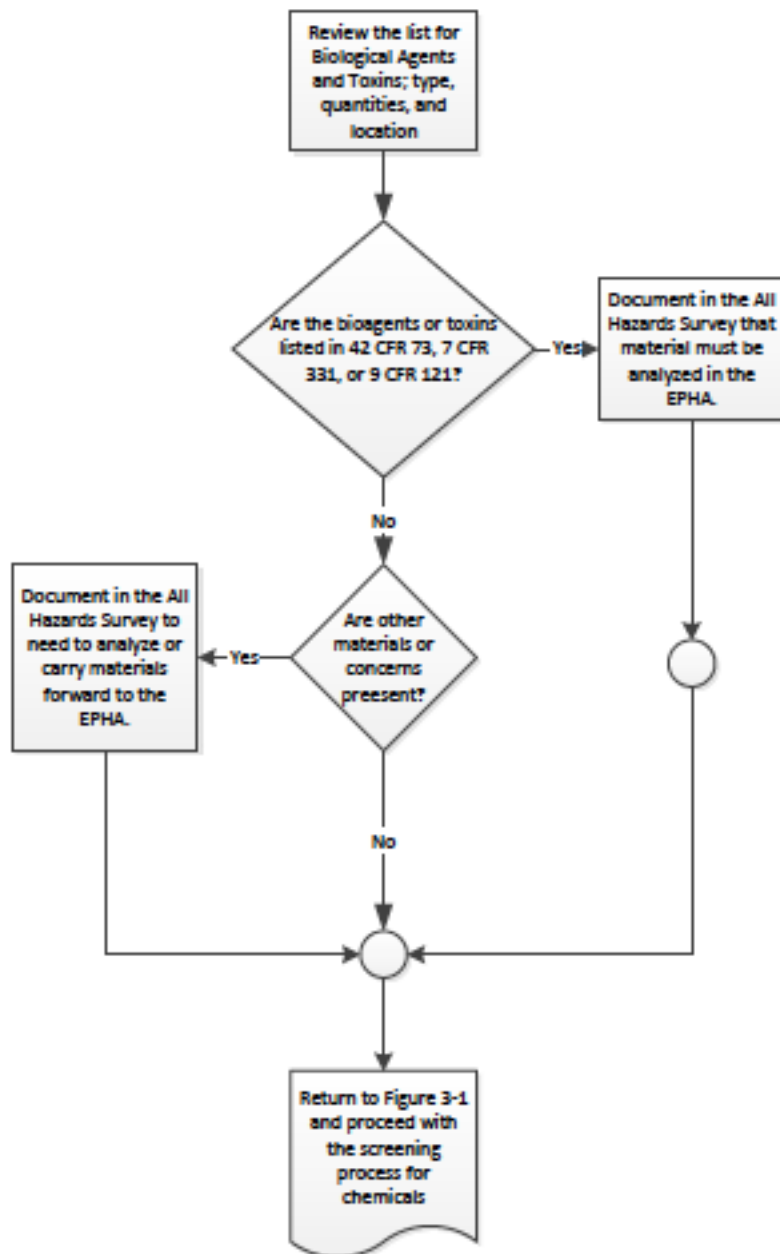
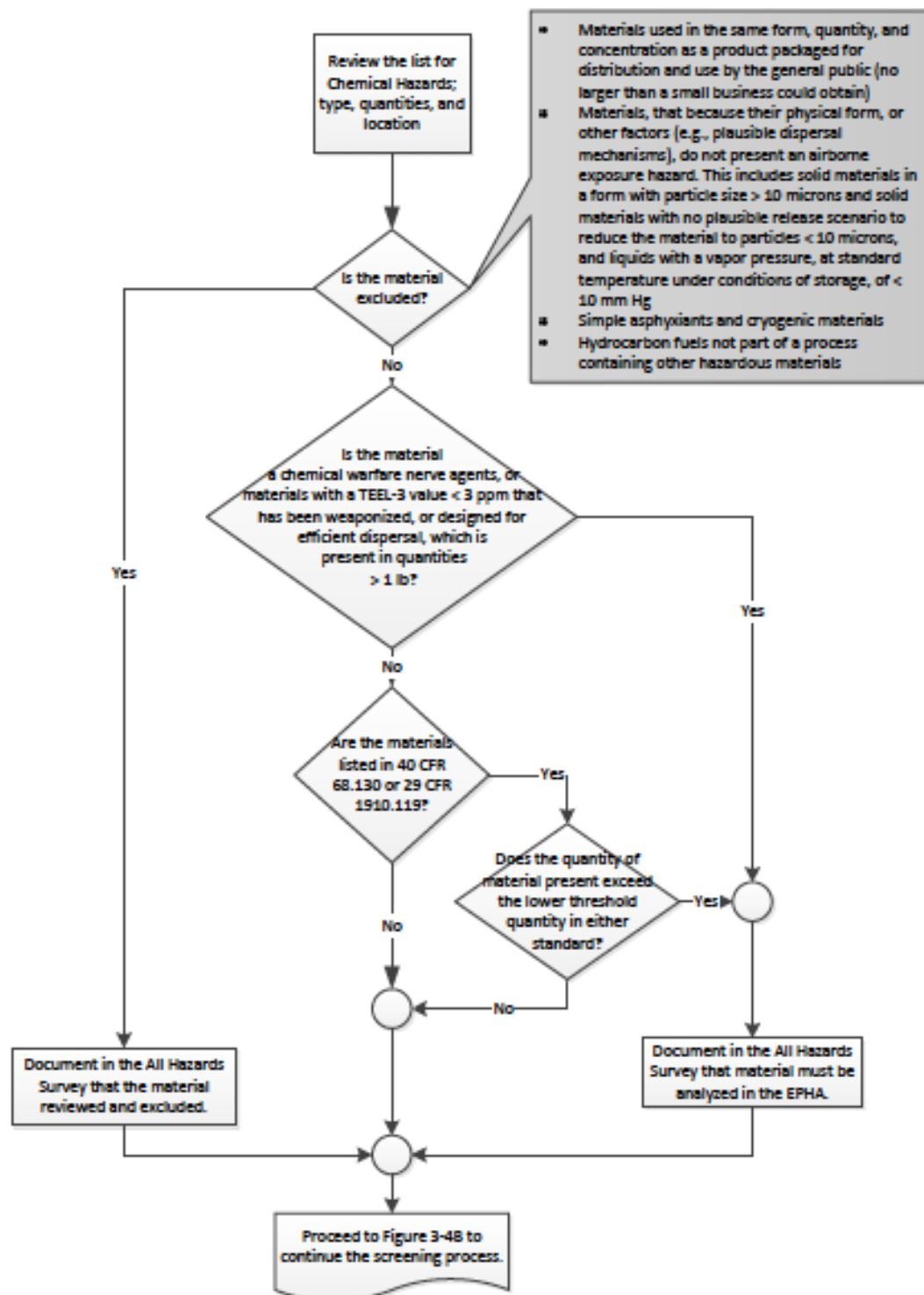


Figure 3-4A, Chemical Hazards Screening*



* - this screening methodology includes the toxicological hazards of radioactive materials

Figure 3-4B, Chemical Hazards Screening

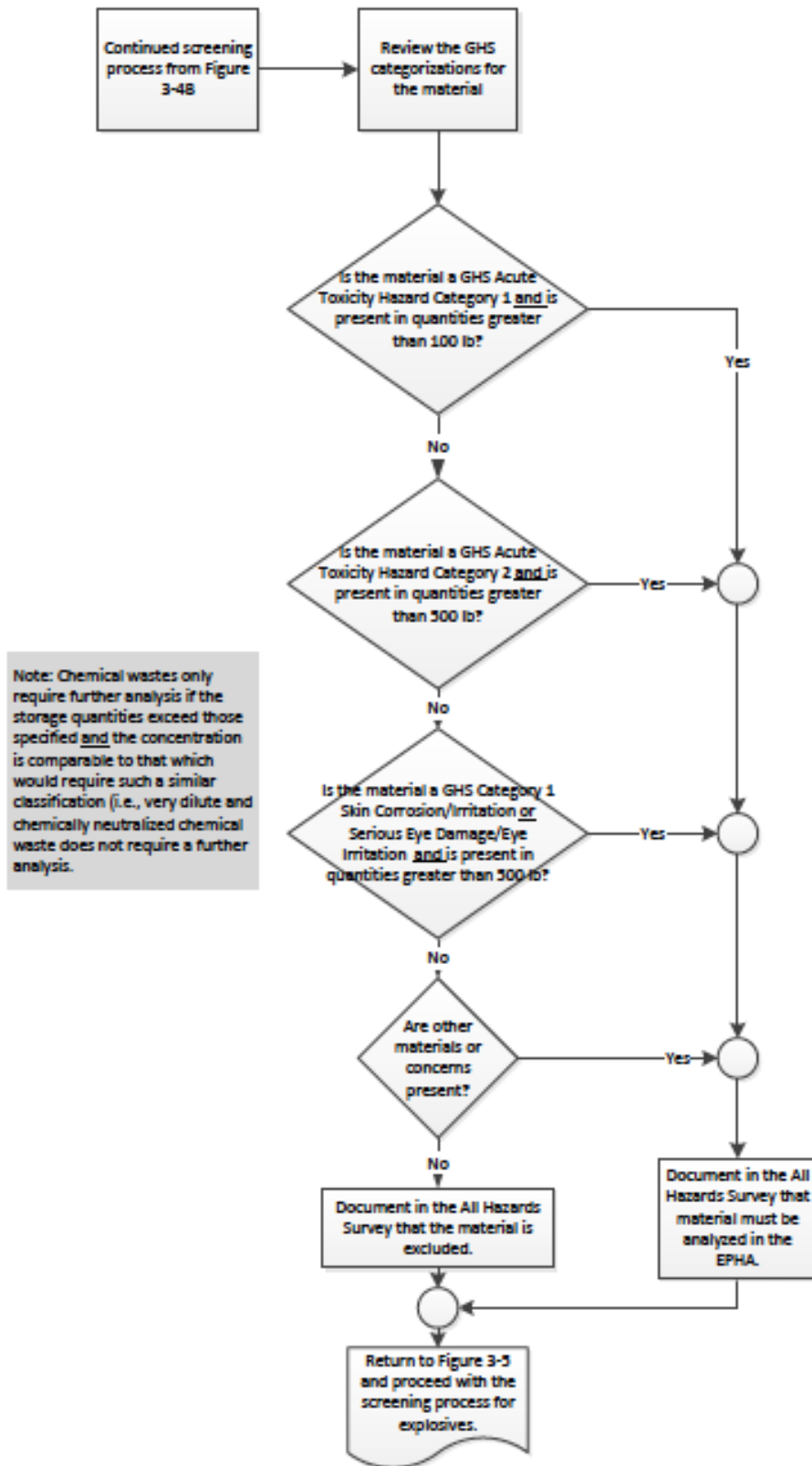
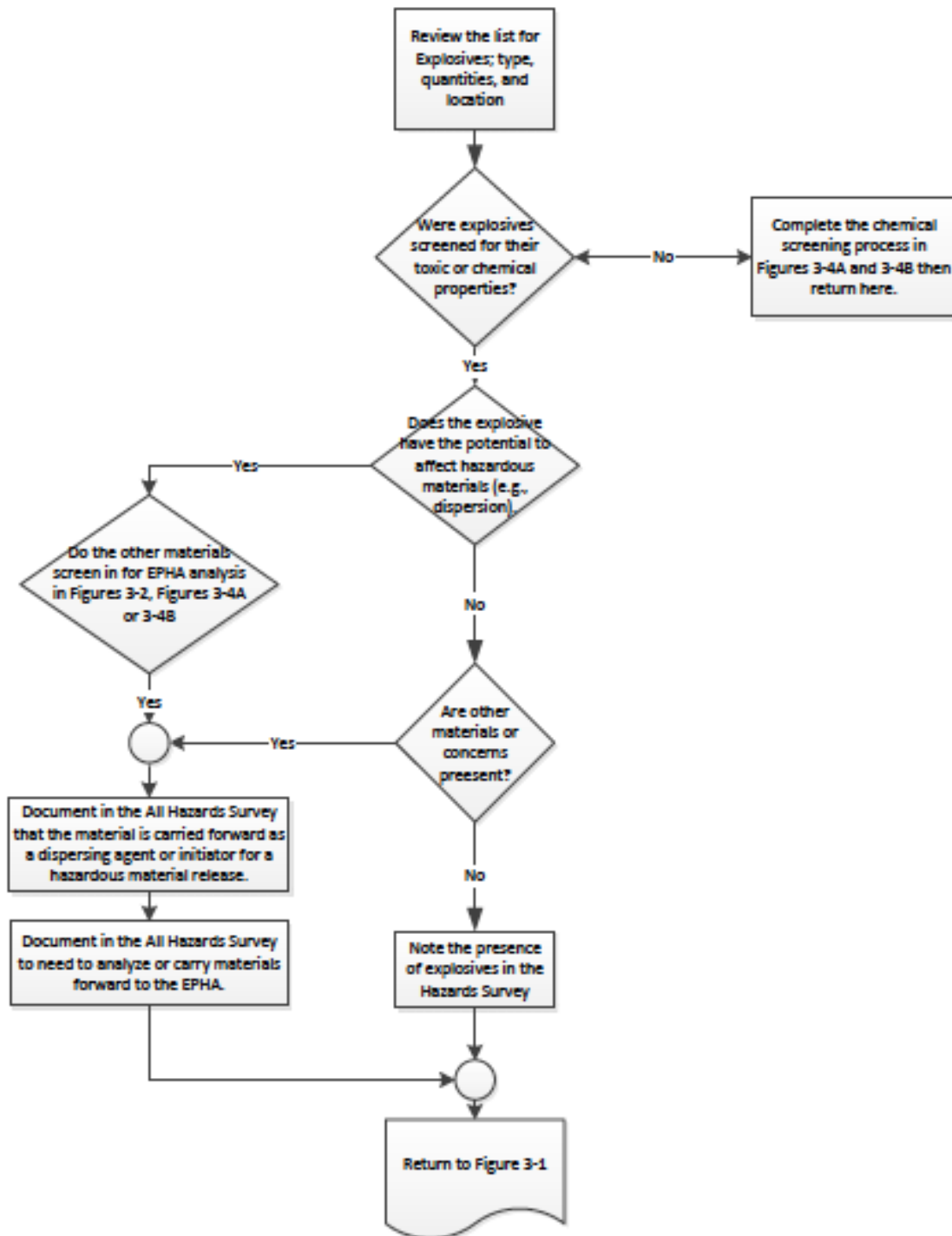


Figure 3-5, Explosive Material Screening



3. EMERGENCY RESPONSE ORGANIZATION. An Emergency Response Organization (ERO) is a structured organization with overall responsibility for initial and ongoing emergency response. At a minimum, an ERO must –
 - a. be established and maintained for each DOE/NNSA site/facility/activity;
 - b. consist of personnel with capabilities and resources based on the all hazards planning basis;
 - c. assign an individual ERO position with the authority to implement the site/facility/activity emergency management plan to include management and control of all aspects of the site/facility/activity response;
 - d. designate and train a primary and at least one alternate for each ERO position, excluding first responders in the field, to be available to implement the emergency management plan for initial and ongoing emergency response;
 - e. establish effective control 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; and
 - f. provide designated ERO members with a method of identification for emergency response consistent with NIMS/ICS.
4. EMERGENCY OPERATIONS SYSTEM. DOE/NNSA sites/facilities/activities must have a mechanism, 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 Emergency Operations Center (EOC). DOE/NNSA sites/facilities/activities must accomplish the following.
 - a. Establish an Emergency Operations System to provide strategic management, operational support, planning/intelligence, logistics and finance/administration.
 - b. The Emergency Operations System must be able to perform the following capabilities.
 - (1) Establish and maintain an overall responsibility for supporting and coordinating the response to an emergency.
 - (2) Use the basic NIMS/ICS concepts of common terminology, management unity and delegation of authority, managing by objectives, manageable span of control, and action planning.

- (3) Activate for any declared Operational Emergency impacting the DOE/NNSA site/facility/activity, 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.
 - (4) Be scaled to the level of activation based on the severity of the incident. Staffing and functions must be performed as identified in the emergency management plan.
 - (5) Provide support to the Incident Commander and have the ability to maintain support status under emergency conditions for an extended period based upon the All-Hazards Survey.
 - (6) Use standard operating procedures and checklists to –
 - (a) activate the Emergency Operations System, identify and notify staff, make it operational, and deactivate it;
 - (b) establish communications and coordination with incident command;
 - (c) obtain and maintain situational awareness and disseminate a Common Operating Picture among response components and external partners, as applicable; and
 - (d) develop plans to support –
 - 1 operations by defining overall priorities;
 - 2 establishing operational objectives;
 - 3 establishing personnel accountability; and
 - 4 establishing the Operational Period for the ERO staffing shift changes.
5. TRAINING AND DRILLS. 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. DOE/NNSA sites/facilities/activities must:
 - a. Worker Training.
 - (1) Document and provide training to workers on hazards and protective actions they may be expected to take in accordance with the all-hazards planning basis.

- (2) This training must be provided initially and when there are changes affecting worker actions or responsibilities, and conducted at least annually.
- (3) Provide information on protective actions to visitors who have unescorted access.
- (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.
- (5) Determine based upon the results of the all hazards planning basis 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).

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. Document the training requirements to include the courses, method of instructions, frequency, and intended audience.
- (2) This training must be provided initially, when there are changes, and no less than annually.
- (3) Include the following in ERO training.
 - (a) Initial Training for ERO members must include –
 - 1 the applicable principles of ICS 100, Introduction to ICS, and ICS 700, NIMS, An Introduction;
 - 2 site/facility/activity-specific emergency response concept of operations (as documented in the emergency management plan), as applicable to each position; and
 - 3 position-specific roles and responsibilities to include plans, procedures, job aids, and associated equipment and systems.

- (b) Refresher training must include –
 - 1 lessons learned,
 - 2 best practices, and
 - 3 identified gaps or deficiencies on individual training.
 - c. Offsite Response Agency Orientation. Offer orientation on the site/facility/activity-specific conditions and hazards based on the results of the all hazards planning basis including familiarization on an annual basis.
 - d. Worker Drills.
 - (1) Conduct annual building evacuation drills consistent with 29 CFR 1910.38.
 - (2) 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.
 - e. ERO Drills. DOE/NNSA sites/facilities/activities must accomplish the following.
 - (1) Conduct and document drills so that each ERO member participates at least annually. This may be accomplished by participation in a drill, exercise, or actual incident.
 - (2) Capture improvements and lessons learned to make program improvements to training and drills.
 - (3) Use drill scenarios that are representative of the hazards/threats identified in the all-hazards planning basis.
 - f. Drills Involving Offsite First Response Agencies. Formally invite applicable offsite first responders to participate in a relevant drill at least annually. This may be accomplished by participation in a drill, exercise, or actual incident.
- 6. EMERGENCY MEDICAL SUPPORT. DOE/NNSA sites/facilities/activities must accomplish the following.
 - a. Conduct planning for medical treatment for incidents identified in the all hazards planning basis (e.g., mass casualty situations, treatment of field and first responders).
 - b. Establish provisions for sharing of patient information between onsite and offsite health care providers during emergencies, consistent with the requirements of the *Health Insurance Portability and Accountability Act* (Title 42 United States Code 300).

- c. For sites/facilities/activities containing hazardous materials, document agreements with medical facilities to transport, accept and treat contaminated, injured personnel; including transportation using air ambulance providers.
7. OFFSITE RESPONSE INTERFACES. DOE/NNSA sites/facilities/activities must establish and maintain interfaces with local, state, tribal, 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/NNSA sites/facilities/activities must accomplish the following activities with offsite response organizations.
- a. See paragraphs 5c and 5f of this Attachment for information to be provided to offsite first responders.
 - b. Determine access protocols for routine, abnormal, and emergency conditions.
 - c. Establish a process for communications for use during onsite response.
 - d. Establish a process 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. See paragraph 12.
8. EMERGENCY CATEGORIZATION.
- a. DOE/NNSA sites/facilities must declare an Operational Emergency when incidents occur that represent a significant degradation in the level of safety at a site/facility resulting in potential health and safety hazards to workers or the public.
 - b. Operational Emergencies must be categorized as promptly as possible, but no later than 15 minutes after identification of the decision maker for the categorization, in accordance with the emergency management plan. Such incidents include the following:
 - (1) 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.
 - (a) The discovery of radioactive or other hazardous material contamination from past DOE/NNSA operations that may have caused, is causing, or may reasonably be expected to cause uncontrolled personnel exposures exceeding protective action criteria (PAC).
 - (b) An occurrence (e.g. earthquake, tornado, aircraft crash, fire, explosion, or incidents in table 3-1) that causes significant structural damage to DOE/NNSA facilities, with confirmed or suspected personnel injury or death.

- (c) Any mass casualty incident, as discussed in the Baseline Needs Assessment.
 - (d) An offsite hazardous material incident not associated with DOE/NNSA operations that is observed to have, or is predicted to have, an impact onsite such that protective actions are required for DOE/NNSA workers.
- (2) 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.
- (3) Offsite DOE Transportation Activities. The following incidents or conditions represent an actual or potential release of hazardous materials from a DOE/NNSA shipment: Any accident/incident involving an offsite DOE/NNSA shipment containing hazardous materials that causes the initial responders to initiate protective actions at locations beyond the immediate/affected area.
- (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 73, 7 CFR 331 and 9 CFR 121] 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.
- (5) Safeguards and Security. Security incidents are also subject to reporting in accordance with DOE O 471.4, *Incidents of Security* Concern or other directives as applicable. Per this Order, foreign involvement in security incidents must be reported to the Office of 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 but are not limited to:
 - (a) Unplanned detonation of an explosive device or a credible threat of detonation resulting from the location of a confirmed or suspicious explosive device.

- (b) An actual terrorist attack, active threat (e.g., armed assault), cyber security incident that impacts critical infrastructure, or sabotage incident involving a DOE/NNSA site/facility/activity.
 - (c) Kidnapping or taking hostage(s) involving a DOE/NNSA site/facility/activity.
 - c. 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, Site Area Emergency, or General Emergency) 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.
- 9. **PROTECTIVE ACTIONS.** DOE/NNSA sites/facilities/activities must identify protective actions commensurate for the potential hazards of the site/facility/activity 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. DOE/NNSA sites/facilities/activities must accomplish the following.
 - a. Develop pre-determined protective actions for hazards/threats identified in the all hazards planning basis.
 - b. Develop a process to issue protective actions.
 - c. Develop a procedure to account for employees.
 - d. Consider whether additional protective actions are needed for severe incidents, such as self-help instructions when the site/facility/activity is isolated from outside response assistance and evacuation of the site/facility/activity when conditions are deteriorating.
- 10. **EMERGENCY FACILITIES AND EQUIPMENT.** DOE/NNSA sites/facilities/activities are responsible for the provision of adequate emergency facilities and equipment 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.
 - a. Personal Protective Equipment.
 - (1) DOE/NNSA sites/facilities/activities must provide appropriate personal protective equipment (PPE) to emergency responders commensurate to the hazards present in the working environment.

- (2) DOE/NNSA sites/facilities/activities must identify in the emergency management plan or other documentation, caches of specialty equipment, such as PPE, stretchers, evacuation chairs, and self-rescuers for underground facilities, that may be required if an emergency occurs.
 - b. Communications Equipment. DOE/NNSA site/facility/activity 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.
 - c. Emergency Operations System. DOE/NNSA sites/facilities/activities 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.
- 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 Operational Emergency is terminated. DOE/NNSA sites/facilities/activities must accomplish the following.
 - a. Notifications.
 - (1) See paragraph 9 and 10 of this Attachment for requirements regarding notifications to workers.
 - (2) Provide prompt emergency notifications to emergency response personnel and response organizations.
 - (3) Notify the Cognizant Field Element or appropriate Federal Manager, Headquarters Watch Office, and state, local, and Tribal organizations within 30 minutes of declaration or termination of an Operational Emergency.
 - (4) If the Emergency Operations System is activated for an incident not categorized as an Operational Emergency, the site/facility/activity must notify the Cognizant Field Element and Headquarters Watch Office within 30 minutes of the Emergency Operations System becoming operational in accordance with the emergency management plan.
 - (5) 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 confirmation. If information is unknown at the time of the report, specify so in reporting. The initial notification must include the –

- (a) description of the emergency;
 - (b) date and time emergency was discovered or terminated;
 - (c) damage and casualties;
 - (d) protective actions implemented;
 - (e) potential impacts;
 - (f) agencies involved;
 - (g) level of public/media attention; and
 - (h) contact information.
 - b. Communications.
 - (a) Provide for continuing effective communications among response organizations throughout an emergency.
 - (b) Provide for communication methods among on-scene responders, emergency managers, and response facilities.
 - (c) Provide updates to Headquarters based upon the emergency conditions and/or as directed by Headquarters.
 - (d) Establish provisions to provide updates to workers during an emergency.
 - (e) Initiate communications checks on classified and unclassified communications systems used for initial notification of the Headquarters Watch Office annually.
 - (f) Ensure communications among response facilities, field response elements, and offsite command centers by providing 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.
12. EMERGENCY PUBLIC INFORMATION. DOE/NNSA sites/facilities/activities must provide accurate, candid, and timely information to workers, the media, and the public during an emergency. DOE/NNSA sites/facilities/activities must accomplish the following.
- a. Establish and maintain an emergency public information program consistent with the all hazards planning basis.

- b. Document the emergency public information program in an emergency public information plan or in the emergency management plan. This plan must include –
 - (1) 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;
 - (2) provisions for coordination of information to be released during an emergency;
 - (3) identification of public information media to be used and monitored, such as web sites, social media, news releases, and news briefings;
 - (4) identification of a location(s) for the necessary briefings and news conferences regarding the emergency;
 - (5) identification of training and drills for personnel who will interact with the media;
 - (6) 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;
 - (7) 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;
 - (8) provisions for initial news releases or public statements to be approved by the Cognizant Field Element official responsible for emergency public information review and dissemination; and
 - (9) 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.
13. TERMINATION AND RECOVERY. DOE/NNSA sites/facilities/activities must accomplish the following.
- a. Termination.
 - (1) Establish a predetermined set of criteria for terminating an Operational Emergency. 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.

- (2) Coordinate the decision to terminate the emergency with the responding organizations and the Cognizant Field Element or appropriate Federal Manager, as applicable.
 - (3) Notify the Headquarters Watch Office and other organizations previously notified when the emergency is terminated.
 - b. Recovery. Identify an organization that will address the actions necessary to restore the site/facility/activity to normal operations and document these actions in a recovery plan.
 - c. Post Incident Reporting.
 - (1) Conduct an After Action Review of the Emergency Operations System 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, document the performance review in an After Action Report.
 - (2) For an Operational Emergency, submit the after action report to the Cognizant 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*.
14. READINESS ASSURANCE. DOE/NNSA sites/facilities/activities 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 that 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.
 - a. Evaluations consist of assessments, exercises, and performance indicators.
 - (1) Assessments. DOE/NNSA sites/facilities/activities must conduct assessments to ensure that emergency plans, procedures,

emergency response activities, and resources are adequate and sufficiently maintained.

- (a) Conduct self-assessments 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.
 - (b) Support DOE/NNSA during the conduct of an external assessment.
 - (2) Exercises. DOE/NNSA sites/facilities/activities must conduct an annual site-level exercise to test and validate emergency plans and procedures.
 - (a) The exercise program must be consistent with the Department of Homeland Security Exercise and Evaluation Program.
 - (b) Rotate the scenario for the annual exercise among the hazards and risks identified in the all hazards planning basis.
 - (c) Provide the annual exercise schedule to the Cognizant Field Element Manager or appropriate Federal Manager.
 - (d) Prepare an exercise plan.
 - (e) Submit the exercise plan for the annual evaluated site-level exercise to the Cognizant Field Element Manager or appropriate Federal Manager for approval no less than 30 calendar days prior to the exercise.
 - (f) 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 Cognizant Field Element Manager or appropriate Federal Manager.
 - (3) Performance Indicators. DOE/NNSA sites/facilities/activities must participate in a program of performance indicators.
- b. Improvements. DOE/NNSA sites/facilities/activities must identify improvements that consist of corrective actions and lessons learned.
- (1) Corrective Actions.

- (a) Develop corrective actions for findings identified during evaluations, assessments, drills, exercises, and actual emergencies.
 - (b) Use a formal tracking system to track completion of corrective actions. This tracking system may be part of a site/facility/activity action tracking system.
 - (c) Develop a corrective action plan for findings documenting corrective actions, due dates, and assignees within 45 calendar days of the assessment report or After Action Report.
 - (d) Submit corrective action plans for findings from Federally-directed or external assessments for approval to the Cognizant Field Element Manager or appropriate Federal Manager.
 - (e) Submit corrective action plans for findings from self-assessments to Cognizant Field Element Manager or appropriate Federal Manager.
- (2) Lessons Learned.
 - (a) Use a system for incorporating and tracking lessons learned from training, drills, actual responses, and the site/facility/activity-wide lessons learned program.
 - (b) Review lessons learned from emergency management program activities under DOE Order 210.2A, *DOE Corporate Operating Experience Program*.
 - (c) Review lessons learned and best practices from the Office of Enterprise Assessments annual lessons learned report, which provides opportunities for improving DOE/NNSA emergency management programs.
- c. Emergency Readiness Assurance Plan.
 - (1) DOE/NNSA sites/facilities/activities 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 –
 - (a) highlight program status, including significant changes in the emergency management program (e.g., all hazards planning basis, organizations, and exemptions);
 - (b) include a summary of the THIRA;

- (c) document evaluation results and the status (e.g., open/unresolved or closed) of associated corrective actions;
 - (d) identify what the goals were for the fiscal year that ended and the degree to which those goals were accomplished;
 - (e) identify the goals for the next fiscal year; and
 - (f) be submitted to the Cognizant Field Element Manager or appropriate Federal Manager for approval.
- (2) The Cognizant Field Element Manager or appropriate Federal Manager must prepare and submit a consolidated ERAP covering the sites/facilities/activities 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/NNSA sites/facilities/activities must submit for approval the ERAP to the Cognizant Field Element Manager or appropriate Federal Manager by October 15 of each year unless another date is established between the Cognizant Field Element Manager/appropriate Federal Manager and the site/facility/activity.

EMERGENCY MANAGEMENT HAZARDOUS MATERIALS PROGRAM

This Attachment provides information and/or requirements associated with DOE O 151.1D as well as information and/or requirements applicable to contracts in which the associated Contractor Requirements Document (Attachment 1 to DOE O 151.1D) is inserted.

In addition to the Emergency Management Core Program requirements (Attachment 3), DOE and National Nuclear Security Administration (NNSA) sites, facilities, and activities must establish and maintain an Emergency Management Hazardous Materials Program if the site, facility, or activity contains hazardous materials that were not screened out by the hazardous material screening process in Attachment 3.

1. PROGRAM ADMINISTRATION. See Attachment 3.
2. ALL-HAZARDS PLANNING BASIS/TECHNICAL PLANNING BASIS. An Emergency Planning Hazards Assessment (EPHA) must be prepared and used to define the provisions of the Emergency Management Hazardous Materials Program, ensuring that the program is commensurate with the hazards identified. The EPHA provides the basis for establishing a graded approach that will meet the program requirements outlined in this Attachment. The EPHA must address the following items.
 - a. Identify hazards and the potential consequences from unplanned releases of (or loss of control over) hazardous materials identified in the Hazards Surveys, using accepted industry assessment techniques.
 - b. Include identification of receptor locations of interest for each facility containing significant quantities of hazardous materials including:
 - (1) 30 meters from the release location,
 - (2) 100 meters from the release location,
 - (3) site boundary,
 - (4) emergency response facilities,
 - (5) nearest assembly areas, and
 - (6) nearest offsite at risk population such as emergency buildings, schools, and hospitals.
 - c. Identify analyzed scenarios using short descriptive names with:
 - (1) tabulated consequences for each scenario at identified receptor locations above,
 - (2) consequences versus distance under conservative and average dispersion conditions. Conservative is defined as 95% worst case or F stability and

1.5 m/s. Average is defined as the site specific average or D stability and 3 m/s, and

- (3) distances at which the Protective Action Criteria (PAC) and thresholds of early lethality would be exceeded at receptors identified above.
- d. Report distances to PAC-2 of >25 miles, as 25 miles. The accuracy of available modeling software is inaccurate for distances beyond 25 miles.
- e. 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, Site Area Emergency, or General Emergency, 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).
- f. If the quantitative analysis indicates that all incidents 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 (TQ) levels for chemicals or below TQ for Hazard Category 3 for radiological materials is not required during EPHA and Emergency Action Level (EAL) development.
- g. Include a determination of the size of the Emergency Planning Zone (EPZ).
- h. Include a determination of the size of the Ingestion Planning Zone (IPZ).
- i. Prepare a consolidated/integrated EPZ and IPZ for the site/facility/activity and submit for approval to the Cognizant Field Element Manager or appropriate Federal Manager.
- j. Document assumptions, methodology, models, and evaluation techniques used in the EPHA.
- k. Establish and maintain 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). The method must allow sufficient time for emergency management personnel to review the EPHA and modify plans and procedures, as necessary.
- l. Submit the EPHA for approval to the Cognizant Field Element Manager or appropriate Federal Manager.

- m. Review and update no less than every three years or prior to significant changes to the site/facility/activity or hazardous material inventories. For example, significant changes are those changes which would result in an Unreviewed Safety Question for nuclear facilities, as defined in 10 CFR 830, or in an Unreviewed Safety Issue for accelerator facilities, as defined in DOE O 420.2B.
 - n. If the triennial review of the EPHA determines that there are no updates required, a letter to the Cognizant Field Element Manager or appropriate Federal Manager must be submitted to document the review and provide notification that an update is unnecessary.
 - o. 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.
 - p. 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.
 - q. Develop an EPHA for shipments that do not satisfy governing Department of Transportation (DOT) regulations and specifications for commercial hazardous materials transport; however, if a shipment satisfies DOT regulations and specifications, then an EPHA is not required.
 - r. Develop site/facility/activity-specific EALs for the spectrum of potential Operational Emergencies identified by the EPHA and include protective actions corresponding to each EAL.
 - s. Adjust the emergency management program to be commensurate with hazards that remain after a decontamination and decommission action is completed at each DOE closure site/facility.
3. EMERGENCY RESPONSE ORGANIZATION. See Attachment 3.
4. EMERGENCY OPERATIONS SYSTEM. See Attachment 3.
5. TRAINING AND DRILLS. In addition to the training and drill requirements contained in Attachment 3, DOE/NNSA sites/facilities/activities with an Emergency Management Hazardous Materials Program must also maintain a training and drill program that includes additional capability based upon the results of the EPHAs. These DOE/NNSA sites/facilities/activities must accomplish the following.
- a. Emergency Response Organization. The training and drills program must –
 - (1) consist of self-study, classroom training, and drills;
 - (2) include training on EPHAs and EALs to appropriate ERO members; and

- (3) consist of emergency categorization and classification training to those personnel who perform this function.
 - b. Determine whether drills should be conducted for ERO activities involving hazardous materials releases based upon the EPHAs; and
 - c. First Response Agencies. The training and drills programs must make training available, as practical, to emergency responders, both primary and mutual aid, on any unique hazards. This may include equipment, hazardous materials identified in the EPHA, or facility configuration.
 - d. Each Defense Nuclear Facility must conduct drills that use a graded approach for lower-level emergencies (conduct of operations) involving the Operations staff, Emergency Management staff, and Incident Command staff that include –
 - (1) elements of the Emergency Operations Center (EOC) staff for Operational Emergencies;
 - (2) annual drills integrating the ERO with conduct of operations drills; and
 - (3) regardless of the scope or mechanism (drill or exercise), evaluate Operations staff, Emergency Management staff, internal Incident Command staff, and EOC staff for continuous improvement.
- 6. EMERGENCY MEDICAL SUPPORT. See Attachment 3.
- 7. OFFSITE RESPONSE INTERFACES. In addition to the offsite interface requirements contained in Attachment 3, DOE/NNSA sites/facilities/activities with an Emergency Management Hazardous Materials Program must also coordinate with local, state, tribal, and federal organizations.
 - a. Address protective actions recommended offsite based upon the results of EPHAs.
 - b. Determine a notification process to use during emergencies when protective actions may be recommended offsite.
 - c. Provide information 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 outside of the facility EPZs.
 - d. For Emergency Management Hazardous Materials Program facilities with General Emergencies involving radiological material releases, ensure adequate planning for offsite radiological monitoring support to local and state governments.

8. EMERGENCY CLASSIFICATION. In addition to the emergency categorization requirements contained in Attachment 3, DOE/NNSA sites/facilities/activities 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, Site Area Emergency, or General Emergency 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. DOE/NNSA sites/facilities/activities with a Hazardous Material Program must accomplish the following.
 - a. Establish procedures to classify Operational Emergencies (as an Alert, Site Area Emergency, and General Emergency) based upon the appropriate PAC listed below.
 - (1) For radioactive material, the Protective Action Guides (PAGs) promulgated by the Environmental Protection Agency (EPA) must be used.
 - (2) 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 Temporary Emergency Exposure Limits (TEELs) (level 2 values) developed by DOE.
 - (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.
 - b. Classify as either an Alert, Site Area Emergency, or General Emergency, 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:
 - (1) 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.
 - (1) 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 either the applicable

protective action criterion at or beyond 30 meters but not beyond 100 meters from the release to the environment:

- (2) An actual or potential substantial degradation in the level of safety or security of a nuclear weapon, component, or test device at a fixed site/facility that would not pose an immediate threat to workers or the public.
- (2) Site Area Emergency. A Site Area Emergency 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.
 - (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 protective action criterion at or beyond 100 meters from the release to the environment but not at or beyond the 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) General Emergency. A General Emergency 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.
 - (a) 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.
 - (b) Actual or likely catastrophic failures in safety or security systems threatening the integrity of a nuclear weapon, component, or test device that may adversely impact the health and safety of workers and the public.
- c. Respond appropriately to each emergency classification level. Actions required for response to an Operational Emergency must be implemented. See Attachment 3, Section 4.
- (1) Alert. Declaration of an Alert does not necessarily require the activation of response centers.

- (2) Site Area Emergency. Declaration of a Site Area Emergency requires the same response as for an Alert plus notification and assembly of emergency response personnel and equipment to activate response centers and to establish communications, consultation, and liaison with offsite authorities.
 - (3) General Emergency. Declaration of General Emergency requires the same response as for a Site Area Emergency, 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.
- 9. PROTECTIVE ACTIONS. In addition to the protective action requirements contained in Attachment 3, DOE/NNSA sites/facilities/activities with an Emergency Management Hazardous Material Program must also accomplish the following.
 - a. Identify 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.
 - b. Identify and evaluate incidents in which combinations of protective actions for varying facilities/activities may apply.
 - c. Identify authorities for the lifting or adjustment of protective actions, once protective actions have been taken.
 - d. Establish methods for controlling, monitoring, and maintaining records of personnel exposures to hazardous materials.
 - e. Establish methods for controlling access to contaminated areas and for decontaminating personnel or equipment exiting the area.
 - f. Identify actions that may be taken to increase the effectiveness of protective actions, such as shutdown of heating, ventilation, and air conditioning during sheltering-in-place.
- 10. CONSEQUENCE ASSESSMENT. DOE/NNSA sites/facilities/activities 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). These DOE/NNSA sites/facilities/activities must accomplish the following.
 - a. Establish provisions to conduct consequence assessment that is –

- (1) integrated with emergency classification and protective action decision-making;
 - (2) incorporated with facility and field indications and measurements, as required; and
 - (3) coordinated with offsite agencies.
 - b. Establish provisions to conduct a timely initial assessment with the worst-case source term from the EAL using current meteorological conditions and as information becomes available, the actual source term based on known incident conditions from observations and indicators using current meteorological conditions for onsite and offsite consequences.
 - c. Maintain 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/facility/activity.
 - d. Maintain consequence assessment and atmospheric dispersion modeling resources with the capability to –
 - (1) conduct timely initial assessment by producing a plume projection product for the worst-case and actual source term described in paragraph 10b above;
 - (2) 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;
 - (3) conduct continuous ongoing assessment for the duration of the emergency as additional information (e.g. field data, source term, etc.) becomes available; and
 - (4) maintain field monitoring capabilities to perform field monitoring activities to confirm the plume boundaries.
- 11. EMERGENCY FACILITIES AND EQUIPMENT. In addition to the emergency facilities and equipment requirements contained in Attachment 3, DOE/NNSA sites/facilities/activities with an Emergency Management Hazardous Materials Program must also establish and maintain the following facilities and equipment.
 - a. Emergency Operations Center. Designate and maintain a facility for use as an Emergency Operations Center. The EOC must be –
 - (1) accessible on a twenty-four hour basis to authorized onsite and offsite ERO members;

- (2) equipped with systems and equipment to support EOC activities, such as information management, mapping, and secure and non-secure communications; and
 - (3) 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.
 - b. 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 180 degrees opposite the EOC (i.e., upwind from the prevailing wind direction).
 - c. New Emergency Operations Center. Incorporate the following criteria into the design, construction, and maintenance of new EOCs at DOE/NNSA 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 materials 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 Cognizant Field Element Manager or appropriate Federal Manager per DOE Order 420.1C) 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 infrastructure may be disrupted.
 - (4) Any new Emergency Operations Center (EOC) design and construction project that has received CD-2 (Performance Baseline) approval as of the date of issuance of this Order, is exempt from the requirements of paragraph 11.c.
 - d. Joint Information Center.
 - (1) Have provisions 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.

- (2) Maintain equipment and systems to support JIC activities to include public inquiry, media inquiry, media monitoring, media support services, and management and administrative activities.
 - (3) Identify a location for the JIC outside the EPZ.
- e. Communications Equipment.
 - (1) Maintain EOC primary and backup communications capabilities adequate to support incidents identified in the EPHAs.
 - (2) Maintain equipment capable of transmitting information in a secured fashion if classified or controlled unclassified information is generated, handled, or stored by the site/facility/activity.
- f. Meteorological Monitoring Equipment.
 - (1) Maintain a meteorological capability to provide real-time onsite/local meteorological data and maintain access to meteorological expertise for site consequence assessments.
 - (2) 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 and DOE-HDBK-1216-2015).
 - (3) 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/facility/activity has EPHA results that indicate the potential for a General Emergency.
- g. Defense Nuclear Facilities must identify emergency response facilities (i.e., primary EOCs, control rooms, operation centers, medical facilities, fire departments). For these facilities, the DOE/NNSA facility/site must –
 - (1) develop compensatory measures for emergency response facilities that are not survivable and habitable, and
 - (2) maintain and test safety functions and features to ensure they function as designed.
- h. Defense Nuclear Facilities must –
 - (1) develop safe shutdown or walkaway strategies for equipment and facilities during abnormal events and emergencies, and

- (2) ensure seamless operations, from daily operations to an abnormal event to an emergency.
- 12. NOTIFICATIONS AND COMMUNICATIONS. Notify local, state, Tribal, and federal authorities of classified Operational Emergencies within 15 minutes of categorization.
- 13. EMERGENCY PUBLIC INFORMATION. In addition to the emergency public information requirements contained in Attachment 3, DOE/NNSA sites/facilities/activities with an Emergency Management Hazardous Materials Program must also maintain staff and expertise to perform emergency public information activities that include –
 - a. public and media inquiry activities;
 - b. availability of personnel with technical expertise related to the emergency; and
 - c. coordination and direction by the Cognizant Field Element Manager or appropriate Federal Manager public affairs manager or designee.
- 14. TERMINATION AND RECOVERY.
 - a. Predetermined criteria for termination of emergencies must be established.
 - b. 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.
 - c. Recovery procedures must include: dissemination of information to Federal, State, Tribal, 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.
 - d. The decision to terminate an Operational Emergency classified as an Alert, Site Area Emergency, or General Emergency 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 that the response activity is ending or has been substantially scaled back.
- 15. READINESS ASSURANCE. In addition to the readiness assurance requirements contained in Attachment 3, DOE/NNSA sites/facilities/activities 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. These DOE/NNSA sites/facilities/activities must accomplish the following.
 - a. Develop a formal exercise program that includes –

- (1) a matrix that identifies planned exercises over the next five years and elements tested;
 - (2) rotation among scenarios identified in the Technical Planning Basis;
 - (3) exercise scenarios involving radiological hazardous materials, if applicable;
 - (4) rotation of exercise scenarios among hazardous material facilities;
 - (5) invitation of offsite responding agencies and national assets, (e.g., Centers for Disease Control, Department of Agriculture, etc.) every three years;
 - (6) severe event scenarios every five years;
 - (7) test of design control failures in multiple facilities;
 - (8) demonstration of ERO capability; and
 - (9) integration with local, State and Federal agencies.
- b. Develop challenging exercises based on scenarios identified in the Technical Planning Basis that –
- (1) involve high-consequence scenarios;
 - (2) involve multiple response elements; and
 - (3) result in offsite effects.
- c. In order to test and demonstrate the site/facility/activity integrated emergency response capability, conduct the annual site-level exercise as a full-scale exercise involving site-level emergency response organization elements and resources and invite some offsite response organizations to participate every 3 years. This exercise must –
- (1) use a scenario from the spectrum of potential Operational Emergencies identified in EPHAs (rotated among facilities and type of incident and/or initiator), and
 - (2) include demonstration of protective actions.
- d. 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 –
- (1) release of hazardous materials at more than one facility/activity, and

- (2) disruption to site infrastructure, such as power, telecommunications, and roadways, and the unavailability of mutual aid.
- e. EPHA facilities with facility-level EROs must validate facility-level emergency response capability 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.
- f. DOE/NNSA 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.
- 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.
- h. DOE/NNSA 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.
- i. Defense Nuclear Facilities must perform the following.
 - (1) Conduct causal analysis to determine corrective actions for findings identified as a result of noncompliance or life safety.
 - (2) Develop formal corrective action plans for identified findings. The corrective action plan must be approved by the Cognizant Field Element Manager. The Cognizant Field Element Manager must ensure effective corrective actions are tracked, identified, and implemented.
 - (3) Evaluate the effectiveness of corrective actions through verification and validations conducted by an independent reviewer.
 - (4) Identify compensatory measures for findings until causal analysis is performed and corrective actions are identified and implemented.
- j. Defense Nuclear Facilities will use a Criteria and Review Approach Document (CRAD), maintained by the Associate Administrator, Office of Emergency Operations, as an all-hazards focused source document that delineates what must be accomplished to satisfy the requirements of this Directive.

SECURE TRANSPORTATION

This Attachment provides information and/or requirements associated with DOE O 151.1D as well as information and/or requirements applicable to contracts in which the associated Contractor Requirements Document (Attachment 1 to DOE O 151.1D) is inserted.

This Attachment provides information and additional requirements associated with DOE O 151.1D applicable to the National Nuclear Security Administration (NNSA), Secure Transportation Operations.

The Office of Secure Transportation (OST) is responsible for providing safe and secure transportation of nuclear weapons, nuclear weapon components, and special nuclear materials (SNMs) in support of the national security of the United States of America. In addition to the applicable Emergency Management Core Program requirements contained in Attachment 3 and the applicable Emergency Management Hazardous Materials Program requirements contained in Attachment 4, OST must establish and maintain an emergency management program consistent with the requirements of this Attachment. The requirements of this Attachment apply to all elements of secure transportation and will take precedence in cases of conflict.

1. OST ROLE DURING AN EMERGENCY. OST emergencies can occur on a DOE/NNSA site, U.S. Department of Defense (DoD) installation, or at an offsite civilian location during transport. The OST response requirements for each location include:
 - a. DOE/NNSA Host Site/Facility. If an emergency occurs at a DOE/NNSA host site or facility, officials at that site have the responsibility for managing the emergency. OST must aid and assist the host site in accordance with *Concept of Operations between NNSA Host Sites and the Office of Secure Transportation*. OST must also accomplish the following.
 - (1) Provide host-site responders with all necessary documentation about the specific hazardous materials being transported.
 - (2) Integrate, coordinate, and communicate through the host site's Incident Command System (ICS) and Emergency Response Organization (ERO), and subsequent Unified Command as conditions allow.
 - (3) Maintain security and control of the cargo and immediate area surrounding the OST convoy. Admittance into the OST-controlled area must be approved by and is at the discretion of the OST Convoy Commander in Charge.
 - (4) Declare an Operational Emergency and, in turn, the OST Emergency Response Organization Cadre (EROC) will respond.
 - b. Department Of Defense Installation. If an emergency occurs on a DoD installation, officials at that site have the responsibility of managing the response in accordance with DoD regulations. The DoD installation will provide the

Incident Commander. To aid in the response, OST must also accomplish the following.

- (1) Provide DoD responders with all necessary documentation about the specific hazardous materials being transported.
- (2) Declare an Operational Emergency, and, in turn, the OST EROC will be recalled.
- (3) Maintain security and control of the cargo and immediate area surrounding the OST convoy. Admittance into the OST-controlled area must be approved by and is at the discretion of the OST Convoy Commander in Charge.
- (4) Participate in security activities as they pertain to OST equipment and transportation of hazardous materials.
- (5) Assist DoD response elements as requested.

c. Civilian Location. If an emergency occurs at a civilian location, OST must accomplish the following:

- (1) Retain custody of the cargo.
- (2) Provide security for the shipment.
- (3) Assume responsibilities as the initial Incident Commander and participate in the Unified Command with responding agencies.
- (4) Declare an Operational Emergency, and, in turn, the OST EROC will be recalled.

2. SECURE TRANSPORTATION EMERGENCY MANAGEMENT CORE PROGRAM.

a. Program Administration and Management. OST must provide oversight of the following OST facilities.

- (1) Agent Operations Eastern Command located adjacent to the Y-12 National Security Complex in Oak Ridge, Tennessee.
- (2) Agent Operations Central Command located on the NNSA Pantex Plant in Amarillo, Texas.
- (3) OST Training Command located on Fort Chaffee Maneuver Training Center in Barling, Arkansas.
- (4) Agent Operations Western Command located on Kirtland Air Force Base, Albuquerque, New Mexico.

- b. Emergency Medical Support. Emergency medical response for OST personnel must be addressed by the host site and covered by its documented arrangements with medical facilities to accept and treat contaminated, injured personnel.
 - c. Emergency Public Information. Procedures must be developed to ensure coordination of emergency public information activities between the host-site and the OST Headquarters General Counsel.
 - d. Emergency Termination and Recovery. OST must develop procedures in coordination with host sites that address emergency termination and identification and documentation of recovery actions prior to OST personnel returning to their workplace.
3. GROUND TRANSPORTATION HAZARDOUS MATERIALS PROGRAM.
- a. Program Administration and Management. OST must accomplish the following:
 - (1) Review no less than annually emergency response procedures for each DOE site/facility and each DoD facility to or from which OST transports cargo.
 - (2) Develop and maintain procedures to establish a National Security Area (NSA) if applicable during an Operational Emergency.
 - (3) Develop and maintain procedures that ensure reports prepared by the OST EOC are reviewed by a derivative classifier and the Emergency Manager for classified information and Controlled Unclassified Information prior to release.
 - b. Emergency Categorization. The following incidents or conditions represent an actual or potential release of hazardous materials from an OST shipment, or a major security incident without a hazardous materials release, and must be classified as an Operational Emergency. OST will not further classify an Operational Emergency.
 - (1) A terrorist 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, or potential damage, to a nuclear explosive, nuclear explosive-like assembly, or Category I/II quantity of SNM.
- c. Consequence Assessment and Protective Actions. Consequence assessment activities must be integrated with protective action decision-making and coordinated with on-scene agencies.
- d. Emergency Public Information. A procedure must be established and maintained to provide timely and accurate emergency information to NNSA Headquarters Public Affairs Office for its coordination among DOE, state, local, and other Federal agencies prior to release.
- e. Termination and Recovery. Vehicle recovery actions for OST equipment must only occur after a predetermined set of criteria has been met and termination has been coordinated between Unified Command at the scene (including the Senior Energy Official), OST Headquarters, DOE Headquarters, and other participating Federal agencies.
- f. ERO Training and Drills. OST must accomplish the following.
 - (1) Provide ICS training to Federal Agents to ensure their ability to integrate into a state and local Unified Command organization in response to an OST transportation emergency; and
 - (2) Conduct a minimum of one drill per quarter.
- g. Exercises. To validate the OST emergency management program, OST must accomplish the following.
 - (1) Coordinate with the Office of Program Integration, Office of Training and Resources, Office of Mission Operations, and Office of Technical Services.
 - (2) Develop and implement an exercise program.
 - (3) Conduct no less than one exercise annually.
 - (4) Develop a five-year schedule that ensures at least one ERO exercise is conducted annually with a DOE site/facility, DoD installation, or civilian response agency.
- h. Notifications and Communications.
 - (1) Notifications. In addition to the Emergency Management Core Program requirements contained Attachment 3, OST Operational Emergency notification to the Headquarters Watch Office must also include –

- (a) location of the emergency, including coordinates,
 - (b) security and condition of the cargo,
 - (c) whether or not an NSA has been declared,
 - (d) effect on other ongoing OST missions,
 - (e) notifications made, and
 - (f) weather conditions at the scene of the emergency.
- (2) Communications. OST EOC must coordinate the establishment of classified video teleconferencing with Headquarters Watch Office via the Emergency Communications Network as soon as possible after the OST EOC is declared operational.

4. AVIATION OPERATIONS HAZARDOUS MATERIALS PROGRAM.

- a. General Requirements. By law, the Federal Aviation Administration (FAA), the National Transportation Safety Board (NTSB), and civil and military authorities at the airfields used by Aviation Operations Division aircraft have aviation incident responsibilities that supersede NNSA OST authority during an aviation emergency.
- b. Program Administration and Management. To provide effective organizational management and administrative control of the OST Aviation Emergency Program, OST must establish and implement procedures for responding to an aviation emergency. OST aviation operations must accomplish the following.
 - (1) Develop and implement appropriate plans and procedures, consistent with FAA, DOE, and NTSB guidance to ensure an effective aviation emergency operations program.
 - (2) Implement aviation-specific criteria that reflects aviation operational emergency requirements.
 - (3) Develop and implement appropriate and valid security procedures for use during aviation operational emergencies in the civilian community, Federal facilities, and military installations.
 - (4) Develop and implement procedures for establishing and maintaining a National Security Area during an aviation operational emergency, as authorized by the Atomic Energy Act of 1954 and the Nuclear/Radiological Incident Annex to the National Response Framework.

- (5) Develop and maintain procedures that ensure reports prepared by the OST EOC are reviewed by a derivative classifier and the Emergency Manager for classified information and Controlled Unclassified Information prior to release.
- c. Emergency Response Organization. OST must assign a Duty Officer as a liaison for all aviation emergency actions.
- d. Exercises. OST must plan, develop, and conduct no less than one aviation operational emergency exercise every two years. This exercise must include participation of the entire OST ERO.
- e. Communications. OST Aviation Convoy Commander must implement communication procedures with the appropriate aviation authorities (FAA, DoD, NTSB, and other State and/or Federal Agencies).

NATIONAL RESPONSE SUPPORT

This Attachment provides information and/or requirements associated with DOE O 151.1D as well as information and/or requirements applicable to contracts in which the associated Contractor Requirements Document (Attachment 1 to DOE O 151.1D) is inserted.

The Department must be able to respond and bring to bear the full capabilities necessary to address a broad range of hazards and cascading threats to the nation's energy infrastructure, and/or provide Emergency Assistance upon request.

The Office of Electricity Delivery and Energy Reliability (OE) is responsible for development and implementation of the Energy Emergency Program as detailed below in the planning, preparedness, and response phases. The Emergency Incident and Management Council is responsible to ensure the development and implementation of the Emergency Assistance Program as detailed below in the planning, preparedness, and response phases.

1. PLANNING PHASE.

- a. Energy Emergency Program. The Energy Emergency Program must ensure the Department is capable of assisting in the prevention and mitigation of energy crises and their associated economic impacts. The program must provide for DOE assistance for Presidentially-declared emergencies invoking the Stafford Act (Public Law 93-288, as amended) and as implemented through the National Response Framework. As part of the Energy Emergency Program, an Energy Emergency Plan will be developed. It must encompass events or conditions representing, causing, or having the potential to cause, a substantial impact on energy supply or infrastructure in a limited local area, region of the country, or the nation as a whole. The Energy Emergency Plan can be implemented along with the Emergency Assistance Plan.

- (1) Energy Impact Analysis. Impact analyses (i.e., short- and long-range forecasts) for Energy Emergency scenarios are routinely conducted by the Energy Information Administration, Office of Nuclear Energy, Office of Fossil Energy, Office of Electricity Delivery and Energy Reliability, and the Assistant Secretary of Policy and International Affairs.

- (2) Planning Requirements. The DOE Energy Emergency Plan and implementing procedures must be developed to address –

- (a) supply crises due to, but not limited to, international political situations, defense mobilization, natural or technological disasters, energy system sabotage, major accidents involving energy systems, and labor strikes or lockouts;

- (b) Emergency Response Organization (ERO) procedures for energy emergencies, including activation and staffing;
 - (c) the definition of potential emergencies for which the plan is responsible and for which procedures will be developed;
 - (d) Energy Emergency Plan activation thresholds for plan implementation;
 - (e) the process for developing, maintaining, and activation procedures related to the National Response Plan Emergency Support Function (ESF) 12 (Energy) and other ESFs where DOE is a support agency;
 - (f) specific planned roles and resources for Headquarters offices or DOE/NNSA offices in the field required in response to Energy Emergency scenarios;
 - (g) reporting formats for documenting the situation and the DOE response; and
 - (h) process for monitoring and analyzing the energy situation and for responding to an Energy Emergency, including recovery.
- b. Emergency Assistance Program. As directed by Executive Order or other binding agreements, the Department's Emergency Assistance Program must encompass a DOE response to national security threats or other events or conditions requiring DOE assistance, expertise, resources, or assets, and including Continuity of Government and Continuity of Operations Programs. Accordingly, the Emergency Assistance Program must include all activities whereby Departmental resources, emergency response assets, personnel, and/or facilities are used to support Federal Plans, Presidential directions, and State, local, or Tribal agreements of mutual aid. As part of the Emergency Assistance Program, an Emergency Assistance Plan will be developed. The Emergency Assistance Plan can be implemented along with the Energy Emergency Plan.
- (1) Planning Requirements. Emergency Assistance planning must consider deployment of Departmental resources, emergency response assets, and personnel, and/or use of facilities to support Federal interagency plans and agreements, Presidential direction, and State, local, or Tribal agreements of mutual aid. Emergency Assistance may be implemented along with an Energy Emergency response. The DOE Emergency Assistance Plan must address –
- (a) support and direction as prescribed in the National Response Framework;

- (b) support to Presidential direction for continued operations of critical Departmental functions;
- (c) direction and support as prescribed in the Presidentially-mandated National Security Emergency Planning requirements and Continuity of Government concept of operations;
- (d) technical and response assistance to organizations and agencies with which the Department has entered into mutual aid agreements;
- (e) procedures for activation and staffing;
- (f) specific roles and resources required in response to Emergency Assistance scenarios;
- (g) reporting formats documenting the situation and response activities;
- (h) potential emergencies the program is responsible for and development of corresponding procedures;
- (i) provisions for effective coordination, communications, and timely integrated assessment of an incident;
- (j) procedures for adjudicating conflicting views or information;
- (k) mitigation options for decision-makers;
- (l) strategic and operational level aspects of Emergency Assistance; and
- (m) capabilities from across the Department that can be used, as appropriate, in response, consultation, or technical assistance.

2. PREPAREDNESS PHASE.

- a. Energy Emergency Program. The Energy Emergency Program must establish a readiness assurance program, including training, drills, exercises, and evaluation of readiness for Energy Emergencies.
- b. Emergency Assistance Program. The Emergency Assistance Plan must be reviewed annually to ensure the full range of Departmental capabilities are identified to include decision-making process and procedures are relevant and up-to-date. The Emergency Assistance Program will establish a readiness assurance program to exercise the processes for mobilizing laboratory/Departmental assets to include evaluation of the effectiveness of the employment of resources in support of varied scenarios.

3. RESPONSE PHASE.

- a. Energy Emergency Program. Response activities for Energy Emergencies are normally concentrated at Headquarters. DOE responsibilities for Energy Emergencies are delineated within interagency Federal response and recovery plans, Executive Orders, and international agreements. Headquarters must monitor Energy Emergencies for changing requirements and brief the White House and Congressional Offices when requested. The Energy Emergency Plan must be developed to address –
- (1) activation of ESF #12 (Energy) or other ESFs involving DOE as a support agency for energy-related activities, or as directed by the Deputy Secretary;
 - (2) availability of appropriate DOE personnel and resources for energy emergencies in order to communicate pertinent information and provide recommendations to DOE decision-makers;
 - (3) coordination with other Federal agencies or industries;
 - (4) mitigation of the severity of the Energy Emergency and its consequences; and
 - (5) provisions for Headquarters EOC to:
 - (a) provide timely assessment of the dimensions of the Energy Emergency as required under interagency plans or as requested by the Secretary;
 - (b) establish communications, consultation, and liaison with appropriate energy industry entities and other Federal agencies, as appropriate; and
 - (c) notify appropriate Energy Emergency response assets, experts, and resources to respond according to the severity of the situation.
- b. Emergency Assistance Program. The Emergency Assistance Plan, in coordination with the Emergency and Incident Management Council, must address expertise available within the Department to provide assistance for –
- (1) deployment of appropriate response assets and capabilities to include personnel and equipment; and
 - (2) coordination of the response with the Executive Branch, other Federal agencies, or other governments, as appropriate.

