

EMERGENCY PREPAREDNESS

1.0 SCOPE

This Performance Assessment Guide for Emergency Preparedness will be used to carry out the oversight responsibility of the U.S. Department of Energy (DOE) Brookhaven Group. This guide was prepared to assist in conducting performance-based assessments of DOE's prime contractors and subcontractors to ensure that their emergency preparedness programs identify, disposition, and take corrective action on issues that affect satisfactory facility performance. The goals are to ensure that laboratory employees and the public do not experience injuries and illness as a result of emergency preparedness activities and that there is little or no economic loss to the Government.

Emergency preparedness assessments will be directed at all prime contractors and subcontractors working at DOE sites. DOE must ensure that these contractors comply with DOE Orders and with Federal and State regulations. Information developed from this assessment will determine the degree to which this is being done as well as the effectiveness of the laboratory's program.

2.0 ATTRIBUTES AND LINES OF INQUIRY

This section provides lines of inquiry to help assess whether the organization has implemented a program that ensures that emergency preparedness requirements are incorporated into line activities. This section will be used to evaluate the laboratory's line organization.

2.1 Provisions are in place for the continued administration of the emergency preparedness program at the facility.

- Has an individual been designated to administer the emergency preparedness program for the facility? (This individual is responsible for the development and maintenance of the following documents: the emergency plan, the emergency response assurance plan (ERAP) and annual updates, the training and exercise programs, and other documentation related to the emergency preparedness management program at the facility. This individual is also responsible for the coordination of emergency resources and assessment activities, and for the conduct of training and exercise programs.)
- Are internal assessments of each aspect of the emergency preparedness program conducted annually and by persons not directly responsible for administration of that particular aspect of the program?

- Does the designated emergency preparedness program administrator maintain records (such as operator logs and documentation produced by the emergency response organization) that contain information for review and reconstruction of major communications and actions taken during an emergency?

2.2 An emergency plan and the associated procedures necessary to implement the emergency plan have been developed, and are well documented and maintained.

- Are the emergency plan and its associated implementing procedures controlled distribution documents?
- Are the emergency plan and its associated implementing procedures reviewed and updated annually?
- Does the emergency plan contain information to describe each element of the emergency preparedness program, as well as provide an overall picture of the emergency response capabilities?
- Does the emergency plan include material that may be necessary for understanding the plans, such as diagrams, illustrations, maps, and transportation routes?
- Does the emergency plan reference procedures and supporting material (such as Probabilistic Risk Assessments, Master Safeguards and Security Agreements, Environmental Assessments, Environmental Impact Statements, and so forth) that may be used by emergency response personnel?
- Does the emergency plan describe the Emergency Planning Zone (EPZ) for each facility, including topographical features, demographic information, transportation routes, land use, major industrial facilities, public facilities, and jurisdictional boundaries?
- Is the emergency plan consistent with other plans for similar DOE facilities?
- Is the emergency plan coordinated with and compatible with other applicable Federal, State, tribal, and local emergency plans?
- Does the emergency plan incorporate response plans for specific incidents (such as fire, medical emergencies or natural phenomena)?

2.3 An emergency response organization, which has clearly specified authorities and responsibilities for emergency response and mitigation, has been established for each facility.

- Does the emergency response organization for the facility perform, or have the capability to perform, the following functions: event categorization, determination of the emergency class, notification, provision of protective action recommendations, management and decision making, control of onsite emergency activities, consequence assessment, protective actions, medical support, public information, activation and coordination of onsite response resources, security, communications, administrative support, and coordination and liaison with offsite support and response organizations?
- Does the emergency response organization consist of an adequate number of experienced and trained personnel (including alternates) for the performance of the functions listed above?
- Are the responsibilities and tasks required of the emergency response organization assigned to specific individuals, who are identified by name, title or position?
- Does the emergency response organization integrate those organizations, including local agencies, laboratory and private organizations, that may be relied on to provide onsite response services or specialized expertise and assistance to all emergency preparedness activities?

2.4 Adequate arrangements exist to allow the emergency response organization to interface and coordinate with offsite organizations in the event of an emergency.

- Are provisions in place to interface and coordinate with those Federal, State, tribal, and local organizations that are responsible for offsite emergency response or for the protection of the environment and the public health and safety in the event of an emergency?
- Have all interrelationships with offsite Federal, State, tribal and local organizations been prearranged and formally documented to the extent possible?
- For those facilities where the EPZ extends beyond DOE property, have the State, tribal, and local governments been encouraged to develop their own emergency response plans?
- If the State, tribal, and/or local governments have refused to participate in the emergency preparedness program, have the most probable State, tribal and/or local offsite responses been included in the DOE emergency plan?

2.5 The emergency preparedness program for the facility has been based on an assessment of the hazards associated with the operation of that facility. These hazards assessments may be contained in any of the following documents: Safety Analysis Reports; Safety Assessments; Environmental Assessments; Environmental Impact Statements; Probabilistic Risk Assessments; Master Safeguards and Security Agreements; Severe Accident

Analyses; Material Safety Data Sheets; Spill Prevention, Control, and Countermeasure Plans; Pre-Fire Plans; Emergency and Hazardous Chemical Inventory Forms; and Toxic Chemical Release Forms.

- Does the hazards assessment consider the broad range of emergency events that could affect the facility (accidents; hostile attack, terrorism, sabotage or other malevolent acts; or other natural phenomena)?
- Is the hazards assessment for each of the potential operational emergencies detailed enough to include determinations of the following: initiating events, accident mechanisms, possible equipment or system failures, event indications, contributing events, source terms, material release characteristics, topography, environmental transport and diffusion, and exposure considerations?
- Are the assumptions, methods, models, and evaluation techniques used in the hazards assessment fully documented?
- Does the hazards assessment include a determination of the size of the EPZ?
- Are Materials Safety Data Sheets maintained for each of the hazardous chemicals that are in use at the facility? Are these Material Safety Data Sheets available to those personnel who must conduct the emergency preparedness program?
- Are emergency and hazardous chemical inventory forms maintained for each of the hazardous chemicals in use at the facility for which a Material Safety Data Sheet is required? Are these forms available to those personnel who must conduct the emergency preparedness program?

2.6 Provisions are in place to characterize the operational emergencies that may affect a facility as belonging to one of the three operational emergency classes: Alert, Site Area Emergency, or General Emergency.

- Have Emergency Action Levels (which contain specific criteria for recognizing and categorizing events) been developed for the spectrum of potential operational emergencies identified by the hazards assessment?
- Are the initiating conditions (i.e., instrument readings, equipment status, monitor readings, etc.) for each emergency action level specifically identified in procedures and recognizable in a timely manner by responsible personnel?
- Are the Emergency Action Levels consistent with and integrated into the emergency plans and procedures for all offsite emergency response organizations?
- Are the Emergency Action Levels reviewed annually by all organizations that may be involved in emergency response activities?

2.7 Provisions are in place for the timely assessment of the onsite and offsite consequences of an emergency.

- Can an initial assessment of the actual or potential consequences of an emergency be provided in a timely manner?
- Are provisions in place to provide a continuous assessment of the events throughout the emergency?
- Is the process of consequence assessment integrated with the processes of emergency class determination and protective action decisionmaking?
- Can those safety, health, environmental, and security conditions that may affect or exacerbate the emergency continually monitored and evaluated throughout the duration of the emergency?
- Will the efforts to locate and track hazardous materials released to the environment be coordinated with other Federal, State, tribal, and local organizations?

2.8 Specific actions to protect both onsite personnel and the public in the event of an emergency have been predetermined, and arrangements to provide these actions have been made.

- Have Protective Action Guides and Emergency Response Planning Guidelines been developed for the full spectrum of hazardous material releases to the environment?
- Are provisions in place to control and monitor exposures to hazardous materials by onsite personnel? Are records of these exposures maintained?
- Do the existing procedures allow for a complete accounting of all facility personnel within a time not to exceed 45 minutes after the determination of an emergency condition?
- Are procedures in place to provide timely sheltering and/or evacuation of facility personnel?
- Have provisions been made for the radiological and/or hazardous material decontamination of all workers and equipment evacuated from the site?
- Have arrangements been made to provide timely recommendations to the appropriate State, tribal, or local authorities of protective action recommendations (sheltering, evacuation, etc.) for the general public?
- Have the content and the format of the initial emergency notification message, as well as the followup messages, been pre-arranged and standardized in the emergency plan?

2.9 Training programs are in place in support of the emergency preparedness program at the facility.

- Are the applicable governing regulations and standards addressed or described in the training programs?
- Does the training program adequately address emergency preparedness concerns, requirements, and practices to be followed at the facility?
- Does the training clearly identify who has responsibility for implementing the emergency preparedness program?
- Are personnel who are in a position to detect and control performance of the emergency preparedness program appropriately trained and instructed so that the required level of performance is maintained?
- Is training on evacuation and other protective actions provided to all workers at the facility annually?
- Does the formal training program for the qualification of the emergency response personnel for the facility include initial training and annual retraining for both onsite and offsite incidents, including transportation incidents?
- Is the formal training program for the emergency response organization based on an analysis of the tasks to be performed during an emergency?
- Does the formal training program for the emergency response organization contain facility-specific emergency response scenarios?
- Has the formal training program for the emergency response organization been developed with performance objectives?
- Does the formal training program for the emergency response organization emphasize team training?
- Does the annual retraining of the emergency response personnel include training on weaknesses detected during drills and exercises, changes to plans and procedures, and lessons learned from emergencies at other DOE and industrial facilities?
- Is facility-specific orientation training, as well as information on hazards and emergency response plans, provided to offsite state, local, and tribal emergency response personnel annually?

- Does a review of the training documentation show that the course content is comprehensive?
- When training has not yet been received, how is assurance provided that the correct and necessary actions will be carried out by the assigned individual?
- When the level of responsibility changes, is additional training required or provided?
- Do interviews with workers show that they understand the importance and application of the emergency preparedness program?
- Have the emergency training plans and goals for the current and the upcoming fiscal years been identified in the Emergency Response Assurance Plan for the current fiscal year?

2.10 A coordinated program of drills and exercises is an integral part of the emergency preparedness program.

- Are the drills of sufficient scope and frequency to ensure adequate personnel skills, expertise, and response capability?
- Do the drills include applicable emergency response activities from the following list: notification, emergency communication, fire, medical emergencies, hazardous material detection and monitoring, environmental sampling and analyses, security, personnel accountability, evacuation, emergency categorization, weapons handling, decontamination, facility activation, public information, and health physics?
- Is there at least one drill per year to train in notification and emergency communications with regional Federal, State, tribal, and local authorities and DOE Headquarters?
- Is a full-participation exercise, which will demonstrate an integrated emergency response capability, conducted annually for at least one facility on the site?
- Do the full-participation exercises include the full participation of DOE Headquarters and Field Elements? Are accommodations made for all other Federal, State, tribal, and local regulatory and/or emergency response organizations that wish to participate?
- Is a control group established for each exercise to ensure that events occur that address the objectives of the exercise?
- Is an evaluation group established at each exercise to assess the performance of the participants against the objectives of the exercise?

- Is a critique conducted for the exercise to provide initial impressions of accomplishments and shortcomings that are discovered during the exercise?
- Are the drills and exercises designed to emphasize facility-specific events?
- Is each member of the emergency response organization required to participate in a drill or exercise at least once a year?
- Are improvements and corrective actions that are identified during drills, exercises, or actual emergencies incorporated into the emergency preparedness program?
- Have drills and special training plans for the coming 5 fiscal years been included, to the extent that they are known, in the ERAP for the current fiscal year?
- Does the ERAP for the current fiscal year contain information (including participation by any external organizations, numbers of personnel trained, results of training evaluations and significant training deficiencies) about all training drills and exercises that were conducted since the previous update to the ERAP?

2.11 Facilities and equipment are established and maintained for the adequate support of the emergency response.

- Has an Emergency Operations Center (EOC) been established from which the emergency response organization may assess, evaluate, coordinate and direct emergency response activities and may communicate within DOE and with other Federal, State, tribal, and local response organizations?
- Have procedures for the staffing, operation, and response activities of the EOC, and each additional emergency facility, been predetermined and documented?
- Will the EOC be habitable in the event of an emergency? If not, is an alternate EOC available?
- Are both primary and backup means of communication available and capable of operating with other DOE elements and with other Federal, State, tribal, and local response organizations?
- Are adequate equipment and supplies available (and operable) to allow the emergency response personnel to carry out their duties and responsibilities?

2.12 Provisions are in place to give medical support to workers, including those with radiological and/or hazardous material contamination.

- Does the capability exist to provide immediate onsite first aid and emergency medical treatment?
- Have provisions been made for the transport of injured onsite personnel to the appropriate onsite or offsite medical facilities?
- Have arrangements been documented with onsite and offsite medical facilities to accept and treat contaminated, injured personnel?

2.13 Provisions have been made for recovery from an emergency and for reentry into the affected facility.

- Have procedures been established for the decisionmaking and communications associated with the termination of an emergency condition?
- Have procedures been established for the dissemination of information regarding the emergency and the relaxation of public protective actions to Federal, State, tribal, and local organizations?
- Have procedures been developed for the establishment of a recovery organization?
- Do the means exist for the estimation of the dosages to workers and to the general public during recovery and reentry activities?
- Do the means exist for protecting workers and the general public from hazardous exposure during recovery and reentry activities?

2.14 An adequate emergency public information program has been established and integrated into the emergency preparedness program.

- Have the methods and procedures for the timely release to the news media of accurate information regarding the emergency been detailed in the emergency plan?
- Are the procedures in place so that the release of emergency information is coordinated within DOE and with other Federal, State, tribal, and local response organizations?
- Has a spokesperson who is capable of accessing emergency information, exchanging information with spokespeople from other organizations, disseminating information to the news media, and managing public inquiries been designated?

- Has a facility for the accommodation of media personnel and for the coordination of press releases been predesignated?
- Is an ongoing public information program, with the purpose of distributing realistic emergency planning information (such as sources of public information, evacuation routes, sheltering recommendations, etc.) in operation? Is such a program operated in conjunction with State, tribal, and local governments and the news media?

3.0 STANDARDS AND REQUIREMENTS

3.1 Specific DOE Orders and Standards.

- DOE O 151.1, "Comprehensive Emergency Management System."
- DOE O 232.1A, "Occurrence Reporting and Processing of Operations Information."
- DOE O 440.1A, "Worker Protection Management for DOE Federal and Contractor Workers"
- DOE 2300.1B, "Audit Resolution and Followup."
- DOE 2321.1B, "Auditing of Programs and Operations."
- DOE 3790.1A, "Federal Employee Occupational Safety and Health Program, Chapter VIII."

3.2 OSHA Title 29 CFR Requirements.

- Title 29 CFR 1910, Subpart H, Hazardous Materials, primarily 29 CFR 1910.120, "Hazardous Waste Operations and Emergency Response."

4.0 GUIDANCE TO ASSESSOR

This assessment guide is intended to assist in conducting a performance assessment of emergency preparedness. It is not to be considered as all-inclusive, inflexible, or limiting reasonable assessment concentration when lines of inquiry responses dictate that an area must be more thoroughly probed.