U.S. DEPARTMENT OF ENERGY
DEPARTMENT-WIDE
FUNCTIONAL AREA QUALIFICATION STANDARD

EMERGENCY MANAGEMENT FUNCTIONAL AREA QUALIFICATION STANDARD

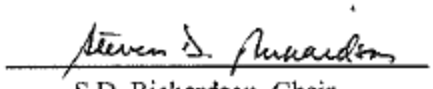
DOE Defense Nuclear Facilities Technical Personnel

U.S. Department of Energy
Washington, D.C. 20585

January 2000

APPROVAL

The Federal Technical Capability Panel consists of senior Department of Energy managers responsible for overseeing the Federal Technical Capability Program. This Panel is responsible for reviewing and approving the Qualification Standard for Department-wide application. Approval of this Qualification Standard by the Federal Technical Capability Panel is indicated by signature below.



S.D. Richardson, Chair
Federal Technical Capability Panel

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ACKNOWLEDGMENT

The Department of Energy, Nevada Operations Office is the Sponsor for the Emergency Management. The Sponsor is responsible for coordinating the development and/or review of the Functional Area Qualification Standard by subject matter experts to ensure that the technical content of the standard is accurate and adequate for Department-wide application for those involved in emergency management. The Sponsor, in coordination with the Federal Technical Capability Panel, is also responsible for ensuring that the Functional Area Qualification Standard is maintained current.

The following subject matter experts (SMEs) participated in the development and/or review of this qualification standard:

Gary Snodgrass	DOE/NV, Emergency Management Division
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FUNCTIONAL AREA

Emergency Management

PURPOSE

The Department's Federal Technical Capability Program Policy, issued by the Secretary in December 1998, commits the Department to continuously strive for technical excellence. The Technical Qualification Program, along with the supporting technical Functional Area Qualification Standards, complements the personnel processes that support the Department's drive for technical excellence. In support of this goal, the competency requirements defined in the technical Functional Area Qualification Standards should be aligned with and integrated into the recruitment and staffing processes for technical positions. The technical Functional Area Qualification Standards should form, in part, the primary basis for developing vacancy announcements, qualification requirements, crediting plans, interviewing questions, and other criteria associated with the recruitment, selection, and internal placement of technical personnel. Office of Personnel Management minimum qualification standards will be greatly enhanced by application of appropriate materials from the technical Functional Area Qualification Standards.

The technical Functional Area Qualification Standards are not intended to replace the U.S. Office of Personnel Management's (OPM) Qualifications Standards nor other Departmental personnel standards, rules, plans, or processes. The primary purpose of the Technical Qualification Program is to ensure that employees have the requisite technical competency to support the mission of the Department. The Technical Qualification Program forms the basis for the development and assignment of DOE personnel responsible for ensuring the safe operation of defense nuclear facilities.

APPLICABILITY

The Emergency Management Functional Area Qualification Standard establishes functional area competency requirements for Department of Energy emergency management personnel who provide assistance, direction, guidance, oversight, or evaluation of contractor technical activities impacting the safe operation of defense nuclear facilities. The technical Functional Area Qualification Standard has been developed as a tool to assist DOE Program and Field offices in the development and implementation of the Technical Qualification Program in their organization. Program and Field offices may choose to use this technical Functional Area Qualification Standard as-is, or they may use parts of it to facilitate the development of their own unique Technical Qualification Standards. In either case, satisfactory and documented attainment of the competency requirements contained in this technical Functional Area Qualification Standard, or similar Standards, ensures that emergency management personnel possess the requisite competence to fulfill their functional area duties and responsibilities.
Office/Facility-Specific Qualification Standards supplement this technical Functional Area Qualification Standard and establish unique operational competency requirements at the Headquarters or Field element, site, or facility level.

IMPLEMENTATION

This technical Functional Area Qualification Standard identifies the technical competency requirements for emergency management personnel. Although there are other competency requirements associated with the positions held by emergency management personnel, this Functional Area Qualification Standard is limited to identifying the specific technical competencies. The competency statements define the expected knowledge and/or skill that an individual must meet. Each of the competency statements is further explained by a listing of supporting knowledge and/or skill statements. **The supporting knowledge and/or skill statements are not requirements and do not necessarily have to be fulfilled to meet the intent of the competency. It is the organization's discretion as to which supporting knowledge and/or skills will be mandatory for local implementation.**

The competencies identify a familiarity level, a working level, or an expert level of knowledge; or they require the individual to demonstrate the ability to perform a task or activity. These levels are defined as follows:

> **Familiarity level** is defined as basic knowledge of or exposure to the subject or process adequate to discuss the subject or process with individuals of greater knowledge.
>
> **Working level** is defined as the knowledge required to monitor and assess operations/activities, to apply standards of acceptable performance, and to reference appropriate materials and/or expert advice as required to ensure the safety of Departmental activities.
>
> **Expert level** is defined as a comprehensive, intensive knowledge of the subject or process sufficient to provide advice in the absence of procedural guidance.
>
> **Demonstrate the ability** is defined as the actual performance of a task or activity in accordance with policy, procedures, guidelines, and/or accepted industry or Department practices.

Headquarters and Field elements shall establish a program and process to ensure that emergency management personnel possess the competencies required of their position. The process includes the competencies identified in this technical Functional Area Qualification Standard or a similar Standard developed by the organization. Documentation of the completion of the requirements of the Standard shall be included in the employee's training and qualification record.

Equivalencies may be granted for individual competencies based upon an objective evaluation of the employee's prior education, experience, and/or training. Equivalencies shall be granted in accordance with the policies and procedures of the program or field office. The supporting knowledge and/or skill statements, while not requirements, should be considered before granting equivalency for a competency.

Training shall be provided to employees in the Technical Qualification Program that do not meet the competencies contained in the technical Functional Area Qualification Standard. Departmental training will be based upon appropriate supporting knowledge and/or skill statements similar to the ones listed for each of the competency statements. Headquarters and Field elements should use the supporting knowledge and/or skill statements as a basis for evaluating the content of any training courses used to provide individuals with the requisite knowledge and/or skill required to meet the technical Functional Area Qualification Standard competency statements.

EVALUATION REQUIREMENTS

Attainment of the competencies listed in this technical Functional Area Qualification Standard should be documented by a qualifying official or the immediate supervisor of emergency management personnel using any of the following methods:

- Documented evaluation of equivalencies
- Written examination
- Documented oral evaluation
- Documented observation of performance

CONTINUING EDUCATION, TRAINING AND PROFICIENCY

Emergency Management personnel shall participate in continuing education and training as necessary to improve their performance and proficiency and ensure that they stay up-to-date on changing technology and new requirements. This may include courses and/or training provided by:

- Department of Energy
- Other government agencies
- Outside vendors
- Educational institutions

A description of suggested learning proficiency activities, and the requirements for the continuing education and training program for emergency management personnel are included in Appendix A of this document. *[note: Appendix A may be developed at a later date, and not included as part of the initial issuance of the standard.]*

DUTIES AND RESPONSIBILITIES

The following are the typical duties and responsibilities expected of DOE defense nuclear facility technical personnel assigned to the Emergency Management Functional Area:

1. Communicate with Headquarters, Field elements, regulatory agencies, international, Federal, State, tribal, and local emergency response organizations, and the public.

2. Inform and advise the Department of Energy community of emergency management program status, activities, and issues.

3. Plan, observe and evaluate emergency management activities and Federal and contractor technical performance to ensure the adequacy, effectiveness, and compliance with Department of Energy (DOE) Order Series 151.1 and other DOE Orders and Federal regulations.

4. Review, and/or approve emergency management documentation.

5. Serve as a Department of Energy technical point-of contract and/or subject matter expert for emergency management activities.

6. Facilitate the notification and reporting of occurrences under Department of Energy (DOE) Orders 232.2, Occurrence Reporting and Processing of Operations Information, and 151.1, Emergency Categories, Classes, and Notification and Reporting Requirements.

7. Participate in developing, negotiating, and managing agreements, including memorandum of agreement (MOA) and memorandums of understanding (MOU).

8. Resolve, or facilitate the resolution of, emergency management issues.

9. Respond to and participate in facility, site, or local emergency events/exercises and serve as the Department of Energy presence for emergency activities, exercise or operations.

10. Recommend the mobilization of Department of Energy emergency response assets, as appropriate.

11. Support the development, implementation, and evaluation of emergency plans.

Additional duties and responsibilities specific to the site, facility, operational activities, and/or other involved organizations shall be contained in the Facility-Specific Qualification Standards(s).

Position-specific duties and responsibilities for emergency management personnel are contained in their Office/Facility-Specific Qualification Standard or Position Description.

BACKGROUND AND EXPERIENCE

The U.S. Office of Personnel Management's Qualification Standards Handbook establishes minimum education, training, experience, or other relevant requirements applicable to a particular occupational series/grade level, as well as alternatives to meeting specified requirements.

The preferred education and experience for emergency management personnel is:

1. Education: Bachelor of Science degree in engineering, physical science, or other related technical discipline; or meet the alternative requirements specified in the Qualification Standards Handbook for the GS-0800, Professional Engineering Series and for the GS-1300 Series, Physical Scientist.

2. Experience: Industry, government, military, or Departmental facility operations-related experience that has provided specialized experience in the areas of emergency management, emergency response, hazardous materials, industrial safety, regulatory

compliance, industrial or facility operations, and/or quality assurance. Specialized experience may be demonstrated through possession of the competencies outlined in this standard.

REQUIRED TECHNICAL COMPETENCIES

Each of the competency statements defines the level of expected knowledge and/or skill that an individual must possess to meet the intent of this Technical Qualification Standard. **The supporting knowledge and/or skill statements further describe the intent of the competency statements but are not requirements.**

Note: When regulations or Department of Energy directives or other industry standards are referenced in the Qualification Standard, the most recent revision should be used.

1. Emergency management personnel shall demonstrate a familiarity level knowledge of the relationship of other disciplines to the emergency management function and the ability to work with personnel in these other disciplines.

Supporting Knowledge and/or Skills

a. Explain the roles and responsibilities of each of the following disciplines to emergency management:

- Integrated Safety Management
- Health Physics
- Environmental Transport & Diffusion (air and water)
- Industrial Hygiene
- Chemistry
- Biology
- Worker and Public Health & Safety
- Hazardous Material (storage, handling, & transport)
- Criticality Safety
- Explosives Safety
- Environmental Protection
- Detection & Monitoring (radiological and non-radiological)
- Consequence Assessment (models & codes)
- Protective Measures (personal protective equipment, sheltering, decontamination, evacuation, & relocation)
- Fire Protection/Fire Suppression Operations
- Operations & Maintenance
- Security
- Medical
- Public Affairs
- Legal

2 Emergency management personnel shall demonstrate a working level knowledge of hazardous material safety to oversee emergency activities and to provide guidance in mitigating emergencies.

Supporting Knowledge and/or Skills

a. Discuss the concerns associated with the use of hazardous materials.

b. Discuss the general safety precautions necessary for the handling, storage, and disposal of hazardous materials, to include explosive, flammable and combustible substances.

c. Describe the types, uses, and limitations of chemical detection and monitoring equipment.

d. Discuss the emergency procedures associated with accidental releases of hazardous materials to the environment, including notifications, protective equipment, decontamination activities, and emergency rescue and treatment.

3. Emergency management personnel shall demonstrate a working level knowledge of health physics and radiation protection to oversee emergency activities and provide guidance in mitigating emergencies.

Supporting Knowledge and/or Skills

a. Describe the different types of radiation.

b. Discuss the fundamentals of radiation protection as related to emergency response.

c. Describe the relationship between dose and radiological injury.

d. Discuss the following terms and concepts: bioaccumulation, biological half-life, intake, contamination, exposure, and criticality.

e. Describe the types, uses, and limitations of radiation detection and monitoring equipment

f. Discuss the emergency procedures associated with radiological releases to the environment, including notifications, protective equipment, decontamination activities, and emergency rescue and treatment.

g. Discuss the general safety precautions necessary for the handling, storage, and disposal of radioactive material.

4. Emergency management personnel shall demonstrate a working level knowledge of protective measures.

Supporting Knowledge and/or Skills

a. Discuss the types, uses, and limitations of radiological, chemical, and personal protective equipment.

b. Describe the implementation and process of decontamination operations in a radiological and chemical environment.

c. Discuss the concepts of sheltering, evacuation, and relocation.

d. Discuss the role of Protective Action Guides, Emergency Response Planning Guides, and pollution standards in emergency planning and response.

5. Emergency management personnel shall demonstrate a working level knowledge of external agency response to an emergency.

Supporting Knowledge and/or Skills

a. Discuss the concept of Emergency Public Information and the role between the Public and Joint Information Center in disseminating information in an emergency.

b. Discuss the use and implementation of Memorandums of Agreement/Understanding with off-site agencies.

c. Discuss the role of the Protective Force in response to an emergency.

d. Discuss the use of Agreements with External Organizations (including Memoranda of Understanding) and the effect on emergency planning and response.

e. Discuss the medical needs in response to an emergency.

6. Emergency management personnel shall demonstrate a working level knowledge of the concepts associated with environmental protection, transport and diffusion.

Supporting Knowledge and/or Skills

a. Discuss wind speed, wind direction, and stability as related to emergency assessment and response.

b. Describe the concepts of concentration and deposition and their relationship to emergency planning and response.

c. Define the terms ground water, surface water, and aquifer and discuss transport and diffusion in these media in the context of emergency planning and response.

d. Discuss the concepts of ecosystem and habitat in the context of environmental protection as part of emergency planning and response.

e. Describe the role of consequence assessment process, including the use of modeling techniques and computer codes and the integration of monitoring information.

7. Emergency management personnel shall demonstrate a working level knowledge of command and control during an emergency.

Supporting Knowledge and/or Skills

a. Discuss the concept and define the components of the Incident Command System

in the context of on-site and off-site emergency response.

b. Describe the relationship of incident command to incident mitigation.

c. Describe the relationship of the Incident Commander to the facility/site emergency response organization.

d. Describe how the transfer of command should occur from the shift supervisor to the facility/site emergency response organization.

e. Describe how the transfer of command should occur between shifts at the incident command post and at the emergency operations center(s).

f. Discuss the training needed for incident commanders and the managers of the emergency response organization.

g. Describe the relationship and regulatory authority(ies) of the on-site emergency organization to those of local, state, and tribal emergency response organizations.

8. Emergency management personnel shall demonstrate a working level knowledge of decontamination procedures.

Supporting Knowledge and/or Skills

a. Describe the equipment and layout required for a decontamination area.

b. List the eight basic methods of decontamination and when they would be applicable.

c. Describe the decontamination process for chemically- or radioactively-contaminated personnel.

d. Describe the decontamination process for chemically- or radioactively-contaminated equipment.

e. Explain the priorities for treatment of radioactively-contaminated, injured personnel.

f. Explain the priorities for treatment of chemically-contaminated, injured personnel.

9. Emergency management personnel shall have a familiarity level knowledge of emergency rescue and treatment.

Supporting Knowledge and/or Skills

a. Discuss the field treatment and transportation requirements for badly injured personnel.

b. Discuss the qualifications of those who apply basic and advanced first aid, emergency medical technicians, and paramedics.

c. Discuss symptoms and field treatment of hypothermia and shock.

10. Emergency management personnel shall demonstrate a working knowledge of the integration/interface of the following types of emergency plans:

- Site emergency plans
- Facility emergency plans
- Building emergency plans
- Security emergency plans
- Spill prevention, containment and countermeasure plans
- Fire prevention/suppression plans
- Other worker safety plans
- Local, state, and tribal emergency plans
- Other environmental emergency contingency plans

Supporting Knowledge and/or Skills

a. Describe the typical content and applicability of each of the emergency plans listed above.

b. Describe the integration/interface of the listed plans.

c. Describe the roles and responsibilities of the on-site and off-site emergency response organizations identified in the above emergency plans.

11. Emergency management personnel shall demonstrate a working level knowledge of the relationships of emergency planning, preparedness, response, and post-incident activities.

Supporting Knowledge and/or Skills

a. Discuss the relationships of emergency planning, preparedness, response, and post-incident activities.

b. Define recovery and reentry, and describe the typical contents of recovery and reentry plans.

c. Discuss the roles and responsibilities of the Departmental organizational elements in developing recovery and reentry plans.

12. Emergency management personnel shall demonstrate an expert level knowledge of the following emergency management related Department of Energy (DOE) Orders:

- **DOE Order 151.1, Emergency Management System**
- **DOE Order 151.1-1 V3-3, Categorization and Classifications of Operational Emergencies**
- **DOE Order 151.1-V3-4, Notifications and Communications**
- **DOE Order 151.1 V2, Hazardous Survey and Hazards Assessments**
- **DOE Order 151.1-1 V5-3, Emergency Readiness Assurance Program**

Supporting Knowledge and/or Skills

a. Describe the purpose of the Orders listed above.

b. Discuss the general roles and responsibilities of the departmental elements for management of the Department's Emergency Management System.

c. Define "Operational Emergencies" and the circumstances to which they apply.

d. Discuss the classes of hazards contained in DOE Order 151.1, Emergency Management System.

e. Discuss the Department's three-tiered organizational approach to managing Operational Emergencies.

f. Review and comment on appropriate plans and procedures for timely and accurate determination of emergency class, notification and reporting of emergency events.

g. Using the appropriate section of DOE Order 151.1, Planning and Preparedness for Operational Emergencies, Section 8, Policy, discuss the stated policy.

h. Discuss the concept of “commensurate with hazard” stated in the Planning and Preparedness for Operational Emergency section of DOE O 151.1.

i. Using the Requirements Section of DOE Order 151.1, Planning and Preparedness for Operational Emergencies, and the applicable Department of Energy Emergency Management Guide, discuss the purpose and function of each of the following required program elements:

- Emergency response organization
- Off-site response interfaces
- Operational Emergency Event Classes
- Notification
- Consequence assessment
- Protective actions
- Medical support
- Recovery and reentry
- Public information
- Emergency facilities and equipment
- Training
- Drills and exercises
- Program administration

j. State the purpose of an Emergency Readiness Assurance Plan.

13. Emergency management personnel shall demonstrate a working-level knowledge of the capabilities of the Department of Energy National Response Assets.

Supporting Knowledge and/or Skills

a. Discuss the specific responsibilities of the Regional Coordinating Office associated with the Radiological Assistance Program, DOE Order 153.1.

b. Discuss the functions, capabilities, and limitations of the Accident Response Group, DOE Order 153.1.

c. Describe the capabilities, limitations, and responsibilities of the Nuclear Emergency Search Team, DOE Order 153.1.

d. Discuss the purpose, activation method, and capabilities of the Radiological Assistance Teams, DOE Order 153.1.

e. Describe the capabilities, limitations, and response times of the Aerial Measuring System, DOE Order, 153.1.

f. Discuss the function, responsibilities, response times, and logistical needs of the Federal Radiological Monitoring and Assessment Center, DOE Order 153.1.

g. Describe the functions, major input parameters, and response times of the Atmospheric Release Advisory Capability.

h. Discuss the functions and capabilities of the Radiological Emergency Assistance Center/Training Site.

14. Emergency management personnel shall demonstrate an expert level knowledge of the notification and event classification requirements in Department of Energy (DOE) Order 151.1-1, V3-3, Classification and Categorization of Operational Emergencies.

Supporting Knowledge and/or Skills

a. Define the categories and classes of emergency events as stated in DOE Order 151.1,V3-3, Classification and Categorization of Operational Emergencies.

b. Define and discuss the notification requirements in DOE Order 151.1,V3-3, Classification and Categorization of Operational Emergencies, for the reporting of emergency events. Include in this discussion how these requirements differ from the reporting requirements in DOE Order 232.1A, Occurrence Reporting and Processing of Operations Information.

c. Discuss the maximum time frame to make notifications (initial and follow-up) to off-site-facility (HQ, State, local, etc.) agencies after an emergency has been declared as identified in DOE Orders 232.1A, Emergency Management System, and DOE Order 151.1,V3-3, Classification and Categorization of Operational Emergencies. Include in this discussion a description of the priorities for making these notifications.

d. Discuss the reasons for making initial and follow-up notifications to off-site agencies as directed in DOE Order 151.1, Occurrence Reporting and Processing of Operations Information, and DOE Order 151.1,V3-3, Classification and Categorization of Operational Emergencies.

e. Compare the Department's notification requirements contained in DOE Order 151.1,V3-3, Classification and Categorization of Operational Emergencies, with those contained in the Resource Conservation and Recovery Act, Clean Water Act, Clean Air Act, Comprehensive Environmental Response, Compensation and Liability Act, Hazardous Material Transportation Uniform Safety Act, and the Emergency Planning and Community Right to Know Act.

15. Emergency management personnel shall demonstrate a working level knowledge of the notification and reporting requirements in Department of Energy (DOE) Order 232.1A, Occurrence Reporting and Processing of Operations Information.

Supporting Knowledge and/or Skills

a. Define "reportable occurrence" and the rationale associated with reporting as identified in DOE Occurrence Reporting Order.

b. Using an actual facility-specific occurrence report, discuss the factors that contributed to the occurrence.

c. Using the Requirements Section of the DOE Occurrence Reporting Order, describe the intent and contents of the following for notification reports:

- Analysis
- Categorization
- Closeout
- Corrective action implementation
- Generic implications
- Identification
- Notification process
- Reporting philosophy
- Reporting requirements
- Root cause determination
- Tracking

d. Explain the responsibilities of the emergency management personnel and Management and Operating (M&O) contractors for occurrence reporting, including a discussion of the following:

- Notification report
- 10-day occurrence report
- Final report
- Closing out and verifying occurrence reports
- Processing occurrence reports which cross lines of emergency management responsibility
- Contractor occurrence reporting procedures

d. Explain the conceptual differences and relationship between "occurrence reporting" and "notification" as contained in the DOE Occurrence Reporting order and DOE Order 151.1-1,V3, Categorization and Classifications of Operational Emergencies.

16. Emergency management personnel shall demonstrate a working level knowledge of the following guidance documents sufficient to apply the guidance to emergency management activities.

- **Emergency Management Guides (EMGs)**
- **Emergency Response Planning Guidelines (ERPGs)**
- **Protective Action Guide (PAG)**
- **Transportation Emergency Preparedness Program Strategic Plan**

Supporting Knowledge and/or Skills

a. Discuss the topic associated with each of the Emergency Management Guides including implementation polices and methodologies.

b. Discuss the development and implementation of Emergency Response Planning Guidelines and alternatives to use where they do not exist.

c. Discuss the relationship between the Emergency Response Planning Guidelines and the Protective Action Guide associated with radiological exposure.

d. Using the Hazard Assessment Guide (HAG), discuss the screening process including the screening thresholds for extremely hazardous, hazardous, and radiological materials.

e. Discuss the philosophy of Emergency Action Levels (EALs) both symptomatic and event based as discussed in the DOE Order 151.1.

f. Discuss the basis for determining the event classification using Emergency Action Levels and potential consequences using the Hazard Assessment Guide.

g. Using DOE Order 151.1, discuss the responsibilities of each of the listed positions in the public information organization.

h. Using the appropriate section of DOE Order 151.1, concerning Planning and Preparedness for Operational Emergencies, and the Emergency Management Guides, discuss the definitions and uses of drills and exercises. Discuss the role of players, controllers, and evaluators with respect to conduct and safety.

i. Discuss the bounds and limitations of free play in regard to a drill or exercise.

j. Discuss the responsibilities for safety during a drill/exercise. Explain how safety is built into a drill/exercise and how it is maintained during performance.

k. Discuss protective actions and their effectiveness with regard to hazards and events.

l. Discuss protective action recommendations with regard to general public implementation.

m. Discuss the hazard characterization process as identified in the Hazard Assessment

Guide.

17. Emergency management personnel shall demonstrate a working level knowledge of the following Federal regulations related to emergency management.

- **10 CFR 835, Occupational Radiation Protection**
- **18 CFR 12, Safety of Water Power Projects and Project Works**
- **29 CFR 1910.38, Employee Emergency Plans and Fire Prevention Plans**
- **29 CFR 1910.94, 96, 134, & 165 Occupational Safety and Health Act (OSHA)**
- **29 CFR 1910.120, Hazardous Waste Operations and Emergency Response**
- **29 CFR 1910.1200, Hazard Communications**
- **40 CFR 262, 264, & 280, Resource Conservation and Recovery Act (RCRA)**
- **40 CFR 265, Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities**
- **49 CFR 172, Hazardous Materials Table, Special Provisions, Hazardous Materials Communication, Emergency Response Information, and Training Requirements**
- **49 CFR 173, Shippers, General Requirements for shipments and Packagings**
- **Superfund Amendments and Reauthorization Act (SARA) Title III**
- **40 CFR 350, Trade Secrecy Provisions and Information Disclosure Requirements**
- **40 CFR 355, Facility Notification and Release Reporting Requirements**
- **40 CFR 370, Hazardous Chemical Inventory Reporting Requirements**
- **40 CFR 372, Toxic Release Reporting Requirements**
- **40 CFR 300 & 302, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**
- **Hazardous Materials Transportation Uniform Safety Act of 1990 (HMTUSA)**
- **Clean Air Act Amendments**
- **Oil Pollution Act**
- **Public Law 93-228 as Amended**
- **40 CFR 112 & 117, Clean Water Act (CWA)**

Supporting Knowledge and/or Skills

a. Discuss the relationship between the requirements of Department of Energy Emergency Management Orders and the above listed Federal Regulations that govern Department operations.

b. Discuss 18 CFR 12, Subpart C, the Oil Pollution Act of 1990, Section 4202(a)(6) and 40 CFR 300, the National Oil and Hazardous Substances Pollution Contingency Plan.

c. Discuss 29 CFR 1910.120 and its impact on defense nuclear facility operations and the training and qualification of emergency response personnel.

e. Discuss the transition from emergency response to post-emergency response.

f. Discuss the differences between a Hazardous Materials (HAZMAT) Team and a Fire Brigade as identified in 29 CFR 1910.120, 40 CFR 264, and 40 CFR 265.

f. Define the roles and responsibilities of the State Emergency Response Commission (SERC) as required by the Superfund Amendments and Reauthorization Act, Title lll.

g. Discuss the off-site notifications required by 40 CFR 302 and 355 as directed in the Emergency Management Guide (EMG) dealing with notifications.

h. Define the roles and responsibilities of the Local Emergency Planning Committees as required by the Superfund Amendments and Reauthorization Act, Title III.

i. Specify the required emergency response training for "site workers," and those who are not "on-site" on a regular basis.

j. Discuss the similarities and differences of the Emergency Response Plan identified in 29 CFR 1910.120 versus the emergency plan requirements of DOE Order 151.1, Planning and Preparedness for Operational Emergencies.

k. Explain the five levels of hazardous materials response as identified in 29 CFR 1910.120.

l. Discuss the requirements of 40 CFR 264 & 265 with regard to emergency response organizations and its relationship to DOE Order 151.1, Emergency Management.

m. Discuss the 40 CFR 264 & 265 requirements with regard to "Contingency Plans" and their relationship to the requirements of DOE Order 151.1, Emergency Management.

18. Emergency management personnel shall demonstrate a working level knowledge of Departmental emergency management roles and responsibilities.

Supporting Knowledge and/or Skills

a. Explain the emergency management roles and responsibilities of the organizational elements of the Department (Field element, Program Office, others).

b. Describe the roles and responsibilities of the Department in support of the Federal Response Plan, the Federal Radiological Emergency Response Plan, and the National Contingency Plan.

c. Discuss the emergency management relationships of other federal agencies and local, state, and tribal organizations to the Department.

d. Discuss the emergency notification and communication requirements and procedures between the Department and other federal, local, state, and tribal organizations.

e. Explain the Department's role in international emergency management activities.

f. Explain the roles of non-government organizations such as the Training Resources and Data Exchange Emergency Management Special Interest Group, the National Coordinating Council on Emergency Management, and the National Emergency

Management Association relative to the Department's emergency management activities.

19. Emergency management personnel shall demonstrate a working level knowledge of the development, review, and/or approval of emergency management planning documents.

Supporting Knowledge and/or Skills

a. Discuss the purpose and function of the emergency management plan implementation procedures.

b. Explain the relationship between Department of Energy (DOE) Orders, emergency plans, and implementation procedures.

c. Discuss the expected content of and processes used for the development, review and approval of the following documents:

- Exercise packages and post-exercise documentation
- Hazard survey
- Hazard assessments
- Self-assessments
- Outside appraisals
- Exercise corrective action plans
- Consequence assessment model support documentation
- Occurrence reports
- Emergency Management Readiness Assurance Plan

d. Discuss the roles and responsibilities of emergency management personnel as related to the National Contingency Plan (NCP).

b. Describe the process for developing and submitting corrective action plans in response to evaluation and appraisal findings.

c. Describe the process for developing, reviewing, submitting, and approving Emergency Readiness Assurance Plans.

20. Emergency management personnel shall demonstrate a working level knowledge of the process for planning, conducting, and evaluating emergency response exercises.

Supporting Knowledge and/or Skills

a. Describe the process for planning emergency response exercises.

b. Describe the process for conducting an emergency response exercise, including the "players" and "controllers" organizations and the opportunity for post-event critiques.

c. Describe the process for internal and external evaluation of emergency response exercises, including the development or response to findings.

d. Perform one of the following activities related to emergency drills, exercises, or events:

- In accordance with the Emergency Management Guides, act as an evaluator or exercise controller during an exercise.
- Serve as a member of a drill/exercise planning group.
- Serve as a member of a scenario development group for an annual exercise.
- Lead a drill/exercise post event critique.
- Lead the development of and present the formal management critique as identified in the Emergency Management Guides.
- Coordinate the writing of an exercise final report responding to objectives that were both met and not met as identified in the Emergency Management Guides.

21. Emergency management personnel shall demonstrate a familiarity level knowledge of program/project management practices and how contractor resources are applied to meet commitments to emergency management quality, safety, cost, and schedule.

Supporting Knowledge and/or Skills

a. Explain the purpose of project management.

b. Describe the life cycle of a typical project.

c. Describe typical documents and data sources utilized in project management.

d. Identify and explain the major elements of a project, and discuss their relationship.

e. Explain the purpose, and use of a Project Management Plan (PMP).

f. Discuss the role of configuration management as it relates to project management.

g. Describe the purpose and use of work packages and/or planning packages.

h. Describe the purpose of schedules, and discuss the use of milestones and activities.

i. Describe the "critical path method" of scheduling.

j. Describe the requirements for project/program files and documentation.

22. Emergency management personnel shall demonstrate a familiarity level knowledge of contract management as it relates to emergency management.

Supporting Knowledge and/or Skills

a. Describe the role of emergency management personnel in contractor oversight.

b. Explain the types of contracts employed by the Department of Energy.

c. Identify the key elements and features of an effective Department of Energy and operating contractor relationship.

d. Describe the "accountability rule" and discuss the role it plays in contract management.

e. Discuss the "fee-based" evaluation process, include the development of performance criteria, conduct of the evaluation, and documentation and transmittal requirements for performance.

23. Emergency management personnel shall demonstrate a working level knowledge of Integrated Safety Management System assessment techniques to include the planning and use of observations, interviews, and document reviews to assess Department of Energy (DOE) and facility performance, report results of assessments, and follow-up on actions taken as the result of assessments.

Supporting Knowledge and/or Skills

a. Describe emergency management personnel roles with respect to oversight.

b. Describe the assessment requirements and limitations associated with the emergency management personnel interface with contractor employees.

c. Explain the essential elements of a performance-based assessment including the areas of investigation, fact-finding, and reporting.

d. Describe the methods by which noncompliance is determined and communicated to contractor and Department management.

e. Describe the contents of an assessment report.

f. Using the findings from an assessment, develop an assessment report.

g. Explain the significance of each of the following assessment-related activities:

- Exit interviews
- Closure process
- Tracking to closure
- Follow-up
- Corrective action plans

24. Emergency Management personnel shall demonstrate a familiarity level knowledge of DOE Order 225.1a, Accident Investigation Program sufficient to assist in accident investigations.

Supporting Knowledge and/or Skills

a. Understand the criteria for appointing a Type A or B Accident Investigation Team (AIT)

b. Understand the roles of the DOE Accident Investigator and Board Chairperson
c. Understand the role of EH-2 in staffing an Accident Investigation Team.

CONTINUING TRAINING AND PROFICIENCY REQUIREMENTS

Emergency management personnel shall participate in an Office/facility/position-specific continuing training and qualification program that includes the following elements:

1. Emergency management personnel shall either plan, participate in, control, and/or evaluate an emergency management exercise annually.

2. Emergency management personnel shall participate in an assessment of an emergency management program annually.

APPENDIX A
CONTINUING EDUCATION, TRAINING AND PROFICIENCY PROGRAM

The following list represents suggested continuing education, training and other opportunities that are available for emergency management personnel after completion of the competency requirements in this technical Functional Area Qualification Standard. It is extremely important that personnel involved with emergency management maintain their proficiency through continuing education, training, reading, or other activities such as workshops, seminars, and conferences. The list of suggested activities was developed by the Subject Matter Experts involved in the development of the Functional Area Qualification Standard and is not all-inclusive.

Based on the knowledge and experience of the Subject Matter Experts, it is suggested that a minimum of two learning activities per year are necessary to maintain proficiency in the emergency management functional area after completion of the competencies in the Standard and other requirements of the Technical Qualification Program. Specific information necessary for enrollment in Emergency Management courses can be found in the DOE Clearinghouse for Training and Development's Universal Catalog, at http://cted/inel/gov/cted/unicat/index.cfm.

LIST OF CONTINUING EDUCATION, TRAINING AND OTHER ACTIVITIES

Emergency Management Orientation
Emergency Management, Developing Volunteer Resources
Emergency Planning Course
Radiation Emergency Assistance Center Training Course
Emergency Communication and Equipment
Emergency Classification (CBT)
Emergency Event Notifications
Emergency Exposure Controls
Release Reporting and Emergency Planning and Community Right-To-Know Act (EPCRA)