


# TRADE

TRAINING RESOURCES AND DATA EXCHANGE



## **EMERGENCY MANAGEMENT ISSUES**

SPECIAL  
INTEREST  
GROUP

### **Glossary and Acronyms of Emergency Management Terms**

Third Edition

***GLOSSARY AND ACRONYMS  
OF  
EMERGENCY MANAGEMENT TERMS***

Third Edition

Prepared for the Office of Emergency Management  
U.S. Department of Energy

by

The Training Resources and Data Exchange (TRADE)  
Emergency Management Issues Special Interest Group  
Glossary Task Force

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# EMERGENCY MANAGEMENT ISSUES SPECIAL INTEREST GROUP

## BACKGROUND

Training Resources and Data Exchange (TRADE) first explored the establishment of a Special Interest Group (SIG) for emergency management issues in 1986, at the request of TRADE participants. U.S. Department of Energy (DOE) Orders require that contractor facilities establish an emergency management system for operational emergencies, which includes establishment of training programs for all personnel having a role in emergency response. The Emergency Management Issues Special Interest Group (EMI SIG) coordinates the exchange of expertise, ideas, and resources among DOE and contractor emergency management personnel; identifies common issues and priorities, and pursues activities that address shared needs. The EMI SIG is sponsored by DOE-HQ Office of Emergency Management (NN-60). Members of the EMI SIG are emergency managers, coordinators, planners, and trainers from facilities across the DOE system. A Steering Committee composed of DOE Sponsors and advisors and of EMI SIG members, selects activities for SIG members to work on each year.

## EMI SIG ACTIVITIES

The EMI SIG Steering Committee meets at least twice a year to discuss emergency management issues of interest to DOE and DOE contractors, and to plan activities for the EMI SIG membership. The EMI SIG membership meets formally every spring. The Spring Meeting includes presentations, panel discussions, and workshops on emergency management topics of interest to members. Special EMI SIG Task forces may meet up to three times a year (as needed) to develop products for the membership.

## EMI SIG PRODUCTS

- Emergency Management, An Annotated Bibliography
- An Analysis of 1990 Tiger Team Emergency Management Findings
- A Survey of Emergency Management Education Resources Available to the DOE System
- Glossary and Acronyms of Emergency Management Terms, Third Edition
- The Crisis Management Program for Senior Officials
- Guidelines Toward An Integrated Emergency Training System, Second Edition
- Emergency Management Training Program Guide to Good Practice
- Emergency Management in the DOE System, Revised
- Emergency Management of Key Response Personnel
- Enhancing Training Skills of Subject Matter Experts
- The Elements of Tabletop Training
- Developing Exercise Objectives Computer-Based Training (CBT)

## **GLOSSARY BACKGROUND**

The first edition of the Glossary and Acronyms of Emergency Preparedness Terms was produced in December 1988 after several years of work by a Training Resources and Data Exchange (TRADE) Emergency Preparedness Special Interest Group (EP SIG) task force. At that time, definitions from existing DOE Orders and other DOE documents were compiled and reviewed by task force members. With the issuance of the new series of 5500 Services Orders in April 1991, some definitions changed. The EMI SIG Steering Committee decided to produce a second edition of the Glossary and Acronyms of Emergency Management Terms to ensure that EMI SIG members support definitions used in DOE Orders. In order to maintain consistency with the new DOE Order 151.1, the Emergency Management Guides, and the DOE Glossary; the EMI SIG decided to revise the Glossary and Acronyms of Emergency Terms and provide this third edition.

## HOW TO USE THIS DOCUMENT

This document provides a glossary of emergency management and related terms and a listing of emergency management abbreviations and acronyms. The Department of Energy (DOE) asked the TRADE EMI SIG to compile a glossary of emergency management terms. The objective was to produce a comprehensive glossary of commonly used terms and acronyms and choose the single best definition or to develop a consensus definition where multiple definitions exist for the same term.

The glossary of terms has been compiled from definitions from the Draft DOE Glossary located on the DOE Website; applicable DOE Orders and technical standards, other federal regulations; and from the DOE Emergency Management Guides (DOE G 151.1-1). The specific reference for each term is provided in brackets [ ]. Where multiple definitions were found for the same term, the Task Force either derived a consensus definition or used the best definition, giving priority to definitions from DOE orders or other federal documents. Glossary terms are arranged in alphabetical order.

The list of abbreviations and acronyms was compiled from many sources, including those used for the glossary of terms. The abbreviations and acronyms are also arranged alphabetically.

When using abbreviations or acronyms for emergency terms, observe the standard practice of spelling out a word or phrase followed by its abbreviation/acronym in parentheses the first time you use it in a document. Thereafter, you may use an abbreviation without further explanation.

This document is a resource for TRADE EMI SIG members and may be used to:

- Ensure consistency of communication between offsite and onsite responders
- Develop training guidelines
- Develop procedures and plans
- Establish consistency in the use of terms
- Serve as a reference document
- Serve as a dictionary

Requests for copies of this document and suggested revisions to terms or acronyms should be directed to:

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## Emergency Management Terms: Glossary

**Accident.** A deviation from normal operations or activities associated with a hazard, which has the potential to result in an emergency. [DOE G 151.1-1]

**Activity.** Any operational process, system, structure, equipment, or group that fulfills a programmatic purpose. Examples include, but are not limited to, storage areas, radioactive waste disposal and processing systems, burial grounds, environmental restoration projects, tank farms, characterization and decontamination projects, and analytical laboratories. [DOE-EM-STD-5505-96]

**Actors/Role-Players.** Controllers who simulate members of non-participating organizations, and role play key individuals such as injured personnel. They may come in face-to-face contact with the responders, functioning semi-independently as media reporters, next-of-kin, or injured personnel. They may be members of a control cell with telephone communication being the only interaction with responders. [DOE G 151.1-1, Vol. 7]

**Acute Exposure.** Radiation exposure of short duration. [FEMA Radiological Emergency Management Glossary]

**Acute Toxicity.** The ability of a substance to cause poisonous effects resulting in severe biological harm or death soon after a single exposure or dose. [Union Pacific Railroad Environmental Terms Glossary]

**Advance Element of the Emergency Response Team (ERT-A).** The portion of the Emergency Response Team (ERT) that is the first group deployed to the field to respond to a disaster incident. [FEMA Website, Appendix B]

**Aerodynamic Equivalent Diameter (AED).** The diameter of a sphere of density  $1\text{g-cm}^{-3}$  that exhibits the same terminal velocity as the particle in question. [DOE G 151.1-1]

**Airborne Release Fraction (ARF).** The coefficient used to estimate the amount of a radioactive material suspended in air as an aerosol and thus available for airborne transport under a specific set of physical stresses. The ARF is a fraction of the material affected for a discrete event. [DOE G 151.1-1]

**Airborne Release Rate (ARR).** The coefficient used to estimate the amount of radioactive material that can be suspended in air and thus available for airborne transport under a specific set of physical stresses as a function of time. The ARR is often longer-term averages due to the non-discrete nature of the release. [EMI SIG Glossary Task Group]

**Alert.** An emergency class within the Operational and Energy categories of emergency. An Alert is declared when events are predicted, are in progress, or have occurred that result in one or more of the following. [DOE O 151.1]

- (1) An actual or potential substantial degradation in the level of control over hazardous materials (radiological and non-radiological).
  - (a) The radiation dose from any release to the environment of radioactive material or a concentration in air of other hazardous material is expected to exceed either:

- 1 the applicable Protective Action Guide or Emergency Response Planning Guideline at or beyond 30 meters from the point of release to the environment or
  - 2 a site-specific criterion corresponding to a small fraction of the applicable Protective Action Guide or Emergency Response Planning Guideline at or beyond the facility boundary or exclusion zone boundary.
- (b) It is not expected that the applicable Protective Action Guide or Emergency Response Planning Guideline will be exceeded at or beyond the facility boundary or exclusion zone boundary.
- (2) An actual or potential substantial degradation in the level of safety or security of a nuclear weapon, component, or test device that would not pose an immediate threat to workers or the public.
- (3) An actual or potential substantial degradation in the level of safety or security of a facility or process that could, with further degradation, produce a Site Area Emergency or General Emergency.

**Alpha Particle.** A positively charged particle ejected spontaneously from the nuclei of some radioactive elements. It is equal in mass and charge to a helium nucleus and has low penetrating power and short range. The most energetic alpha particle from radioactive decay will generally fail to penetrate the skin. Alphas are hazardous when an alpha-emitting nuclide is introduced into the body. [FEMA Radiological Emergency Management Glossary]

**Alpha Radiation.** A helium nucleus emitted spontaneously from radioactive elements. It is dissipated in a few centimeters of air or less than 0.005 mm of aluminum. [Union Pacific Railroad Environmental Terms Glossary]

**Appraisal.** The formal process by which external or oversight organizations evaluate the ability of an organization or facility to comply with DOE and other applicable regulations, orders, plans, and procedures. [DOE 5500.1B]

**Antiterrorism.** Programs and activities, defensive in nature, used to reduce the vulnerability and attractiveness of people and property as targets of terrorism. [EMI SIG Glossary Task Group]

**Appraisal and Assessment Programs.** Programs intended to ensure that emergency capabilities are sufficient to implement emergency plans and that appropriate and timely improvements are made in response to needs identified through coordinated emergency planning, resource allocation, training, drills, and exercises. [DOE O 151.1]

**Asphyxiant.** A vapor or gas which can cause unconsciousness or death by suffocation (lack of oxygen). Most simple asphyxiants are harmful to the body only when they become so concentrated that they reduce oxygen in the air (normally about 21 percent) to dangerous levels (18 percent or lower). Asphyxiation is one of the principal potential hazards of working in confined spaces. [Union Pacific Railroad Environmental Terms Glossary]



## Emergency Management Terms: Glossary

**Assessment.** The internal process by which an organization evaluates its ability to comply with DOE and other applicable regulations, orders, plans, and procedures, conducted within a single, cognizant Program Office. [DOE 5500.1B]

**Assistance Evaluation.** An assessment that provides guidance during transition to compliance with new requirements. In addition, these evaluations may look at specific areas requested by the evaluated organization. Evaluation reports contain no findings, only identification of issues and recommendations. [DOE G 151.1-1, Vol. 6]

**Authentication.** [Draft DOE Glossary]

- a. (Information Management) A method or process to ensure a communication from one source to another is authentic.
- b. (Nonproliferation and National Security) Security measure designed to establish the validity of a transmission, message, station or originator, or a means of verifying an individual's eligibility to receive specific categories of classified or controlled information; or Certification that a document contains Top Secret Information (Document Accountability).

**Authorization Basis.** Those aspects of the facility design basis and operational requirements relied upon by DOE to authorize operation. These aspects are considered to be important to the safety of facility operations. The authorization basis is described in documents such as the facility Safety Analysis Report and other safety analyses; Hazard Classification Documents, the Technical Safety Requirements, DOE-issued safety evaluation reports, and facility-specific commitments made in order to comply with DOE rules, Orders or policies. (DOE 5480.21) [DOE-EM-STD-5502-94]

**Authorized Derivative Classifier.** An individual authorized to determine that documents or material are (a) unclassified or (b) classified as Restricted Data, Formerly Restricted Data, or National Security Information in accordance with existing guidance or source documents. [DOE-STD-7501-95]

**Auto-Ignition Temperature.** The minimum temperature at which the material will ignite without a spark or flame being present. Along with the flashpoint, auto-ignition temperature gives an indication of relative flammability. [Union Pacific Railroad Environmental Terms Glossary]

**Barrier.** The various "layers of protection" afforded facility and site personnel, the general public and the environment by the design and operational controls of each facility. [DOE G 151.1-1, Vol. 3]

**Barrier Challenged.** A barrier should be considered "threatened" or "challenged" if the events in progress may result in a barrier failure. [DOE G 151.1-1, Vol. 3]

**Barrier Failure.** A barrier is considered to have failed when it no longer provides the protection to facility and site personnel, the general public, and the environment afforded by design or operational controls. Failure of a barrier can usually be recognized by the readings or output from plant instruments such as valve position indicators, failed fuel monitors, pressure sensors, or stack effluent monitors. (Cont'd on next page)

**(Barrier Failure cont'd)** The criteria for declaring that a particular barrier is failed should be stated in terms of specific values on specific instruments (e.g., “Main Stack RMS-19 indicates > 1.5E+8 uCi/sec,” or “Any Valve Position Indicator on panel CI-903 indicates Open”). [DOE G 151.1-1, Vol. 3]

**Base Program.** The planning and preparedness requirements that must be considered based on the description of the potential impacts of the events or conditions identified in the Hazards Survey. The Hazards Survey is the formal mechanism to determine the scope and extent of the Base Program. [DOE G 151.1-1, Vol. 1]

**Becquerel (Bq).** The radioactivity unit of the international system of units. One becquerel equals one nuclear disintegration per second. [FEMA Radiological Emergency Management Glossary]

**Beta Particle.** A charged particle emitted from a nucleus during radioactive decay. The beta particle, with a mass equal to 1/1837 that of a proton, is similar to an electron. Large amounts of beta radiation may cause skin burns, and beta emitters are harmful if they enter the body. Beta particles from radioactive decay are easily stopped by a thin sheet of metal or plastic. [FEMA Radiological Emergency Management Glossary]

**Beta Radiation.** A charged particle emitted from a radioactive atomic nucleus. Beta particles are charged either negative (electrons) or positive (positrons). They travel farther than alpha particles, but the skin can be protected by a thin sheet of metal from these products. [Union Pacific Railroad Environmental Terms Glossary]

**Beyond Design Basis Accidents (BDBAs).** Accidents of the same type as a design basis accident (e.g., fire, earthquake, etc.), but defined by parameters that exceed in severity the parameters defined for the design basis accident. [DOE G 151.1-1]

**Blast Effect.** A pulse of air in which the pressure increases sharply at the front, accompanied by winds, propagated from an explosion. [FEMA Radiological Emergency Management Glossary]

**Calculation Methods.** [DOE G 151.1-1]

1. **Elementary.** Pre-calculated consequences such as tabulated hazards assessment or SAR results or ready reference graphs/figures. The accuracy is limited, they usually provide plume centerline results at a single receptor, and they are easy and quick to use.
2. **Intermediate.** Simplified consequence calculations such as hand calculations, nomograms, overlays, and simplified PC-based computer models. Accuracy is limited and they provide a simple plume footprint, centerline and off centerline estimates, results at several receptors, and are relatively easy and quick to use.
3. **Advanced.** Advanced computerized methods capable of more realistically modeling atmospheric transport and dispersion when operated by a subject matter expert. These are recommended for continuing assessments at high hazard facilities/sites with complex meteorological flows in the region of transport. They more accurately depict plume trajectories and provide complex plume footprints. Although they are generally slow and more difficult to use, recent advances in computer technology are reducing the run times.



## Emergency Management Terms: Glossary

**Carcinogen.** A substance capable of causing cancer. [Union Pacific Railroad Environmental Terms Glossary]

**Catastrophic Disaster.** The term implies an event or incident, which produces severe and widespread damages of such a magnitude as to result in the requirement for significant resources from outside the affected area to provide the necessary response. It results in large numbers of deaths and injuries; causes extensive damage or destruction of facilities that provide and sustain human needs; produces an overwhelming demand on state and local response resources and mechanisms; causes a severe long-term effect on general economic activity; and severely affects state, local, and private sector capabilities to begin and sustain response activities. [FEMA Website, Appendix B]

**Catastrophic Disaster Response Group (CDRG).** The national-level group of representatives from the federal departments and agencies under the Federal Response Plan. The CDRG serves as a centralized coordinating group that supports the on-scene federal response and recovery efforts. Its members have access to the appropriate policy makers in their respective parent organizations to facilitate decisions on problems and policy issues. [FEMA Website, Appendix B]

**Categorization.** (See Event Categorization)

**Category of Emergency.** One of three types of emergencies: Operational, Energy, and Continuity of Government. [Draft DOE Glossary]

**Causal Analysis.** A review of an activity to determine the root cause, to identify less than adequate contributing systemic factors, and to prevent further concerns. [DOE-STD-7501-95]

**Ceiling ("C").** The maximum allowable human exposure limit for an airborne substance, not to be exceeded even momentarily. [Union Pacific Railroad Environmental Terms Glossary]

**Central Nervous System.** The body's organ system that originates, sends, and receives electrical signals to control movement and action. Acute exposures of over 2,200 R cause death within hours by damage to this organ system. [FEMA Radiological Emergency Management Glossary]

**Challenge Examination.** An examination designed to establish the capabilities of a worker with respect to radiation safety and provide an exception to the required training. Challenge examinations should be based on the objectives stated for the training program, and are an approved form of proficiency testing. [DOE G 441.12-1]

**Chemical Dispersion Model.** A brand name for a model. [EMI SIG Glossary Task Group]

**Chemical Model.** Model used to calculate the dispersion of non-radioactive hazardous material. The Chemical Model was developed by the Software Giant Company for use in hazardous material emergency planning and response. It makes use of a straight-line Gaussian dispersion model. [DOE G 151.1-1, Vol. 2]

**Chronic Exposure.** Radiation exposure occurring over long periods of time. [FEMA Radiological Emergency Management Glossary]

**Classification.** (See Event Classification)

**Classification Category.** One of three kinds of classified information: Restricted Data, Formerly Restricted Data, or National Security Information. [Draft DOE Glossary]

**Classification Guide.** A document issued or approved by an authorized original classification authority or the senior agency official and containing explicit classification guidance for the use of Authorized Classifiers and Derivative Declassifiers in making classification, declassification, and appropriate downgrading determinations. [Draft DOE Glossary]

**Classification Level.** A designation assigned to specific elements of information based on the potential damage to national security if disclosed to unauthorized persons. The three classification levels in descending order of potential damage are Top Secret, Secret, and Confidential. [Draft DOE Glossary]

**Classified Material.** Chemical compounds, metals, fabricated or processed items, machinery, electronic equipment, and other equipment or any combination thereof containing or revealing classified information: a. Chemical compounds, metals, fabricated or processed items, machinery, electronic equipment, and equipment or any combination thereof that has been assigned a classification level and classification category. b. Any combination of documents, products, substances, or materials that have been assigned a classification either individually or as a group. [Draft DOE Glossary]

**Classification Review.** If the relevant site/facility/activity is generating classified or Unclassified Controlled Nuclear Information (UCNI), or is conducting operations that are classified or UCNI, then all emergency preparedness documents, such as plans, procedures, scenarios, and assessments, shall be reviewed for classified and UCNI by an Authorized Derivative Classifier or UCNI reviewing official. [DOE O 151.1]

**Classified Information Reviews.** All reports and press releases shall be reviewed for classified or Unclassified Controlled Nuclear Information prior to being provided to unclassified personnel, entered into unclassified data bases, or transmitted using non-secure communications equipment. [DOE O 151.1]

**Cognizant Secretarial Officer.** Head of a Departmental Element who has responsibility for a specific program or facility (ies). These include the Assistant Secretaries for Defense Programs, Energy Efficiency and Renewable Energy, Environmental Management, and Fossil Energy; and the Directors of the Offices of Civilian Radioactive Waste Management, Energy Research, and Nuclear Energy; and a Cognizant Secretarial Officer is a DOE official at the Assistant Secretary level who is responsible for the assignment of work, the institutional overview of any type of facility, or both, and the management oversight of a laboratory. [Draft DOE Glossary]

**Co-located Facility Worker.** Co-located facility workers are those that do not have "hands-on" activities (i.e, administrative workers.) [DOE O 232.1A and DOE M 232.1-1A]

**Combating Terrorism.** Programs and activities, both defensive and offensive, applied against terrorism, domestically and abroad. [EMI SIG Glossary Task Group]

**Combustible.** Capable of burning with a flashpoint between 100 degrees - 200 degrees Fahrenheit (F). [Union Pacific Railroad Environmental Terms Glossary]

**Committed Dose Equivalent (CDE)( $H_{T,50}$ ).** The dose equivalent calculated to be received by a tissue or organ over a 50-year period after the intake of a radionuclide into the body. It does not include contributions from radiation sources external to the body. Committed dose equivalent is expressed in units of rem. [DOE G 151.1-1]

**Common Hazardous Material.** The material is commonly used by the general public. This includes any substance used for personal, family, or household purposes or is present in the same form and concentration as a product packaged for distribution and use by the general public (e.g., motor oil, gasoline, diesel fuel). Common hazardous material also is composed of material in such small quantities (end user quantities) that the hazard can be qualitatively determined to be a local (e.g., worker) concern only. [DOE G 151.1-1]

**Comprehensive Assistance Evaluation.** An assessment of the status of the facility Hazards Assessment and the emergency management functional areas, and identifies objectives. The status is based on a limited sample of the current state of a functional area and the related program objectives. [DOE G 151.1-1]

**Comprehensive Emergency Management System.** The framework for development, coordination, control, and direction of all emergency planning, preparedness, readiness assurance, response, and recovery actions. DOE sites/facilities, including DOE transportation activities, Operations/Field Offices, and DOE Headquarters offices shall develop and participate in an integrated and Comprehensive Emergency Management System to ensure that:

- (a) the Department can respond effectively and efficiently to Operational Emergencies and Energy Emergencies, and can provide Emergency Assistance so that appropriate response measures are taken to protect workers, the public, the environment, and the national security;
- (b) emergencies are promptly recognized and classified, and parameters associated with the emergency are monitored to detect changed or degraded conditions;
- (c) emergencies are reported and notifications are made; and
- (d) reentry activities are properly and safely accomplished, and recovery and post-emergency activities commence properly. [DOE O 151.1]

**Concern.** A negative performance statement, derived from subjective or objective evidence during oversight appraisal or surveillance activities. Concerns are classified as closed, open, or resolved. A Closed Concern is a concern whose corrective action has been completed. An Open Concern is one that exists without resolution or agreement. A Resolved Concern is a concern whose corrective action has been agreed upon but not yet corrected or verified." [Draft DOE Glossary]



**Condition.** Any as-found state, whether or not resulting from an event, that may have adverse safety, health, quality assurance, security, operational or environmental implications. A condition is usually programmatic in nature; for example, an error in analysis or calculation; an anomaly associated with design or performance; or an item indicating a weakness in the management process are all conditions. [DOE O 232.1A and DOE M 232.1-1A]

**Confidential.** The lowest classification level that is applied to information, the unauthorized disclosure of which could reasonably be expected to cause damage to the national security that the appropriate official is able to identify or describe. [Draft DOE Glossary ]

**Consequence.** The result or effect of the release of hazardous materials into the environment. Specifically, the "consequences" of concern are human health effects. [DOE G 151.1-1, Vol. 4]

**Consequence Assessment.** The process used to evaluate the impacts of a release of radioactive or other hazardous materials. The assessment of consequences is the evaluation and interpretation of all available information concerning an actual or potential release of hazardous materials to the environment for the purpose of estimating personnel exposure/dose. [DOE G 151.1-1, Vol. 4]

**Consequence Management.** Planning, preparedness, and response activities for addressing the consequences of a terrorism incident. These activities include measures to: alleviate damage, loss, hardship, or suffering caused by the incident; protect public health and safety; restore essential Government services; and provide emergency assistance to those affected. [EMI SIG Glossary Task Group]

**Containment.** A structure found at nuclear power plants designed to contain any radioactive materials that may be released from the nuclear reactor fuel and cooling systems. [FEMA Radiological Emergency Management Glossary]

**Contamination.** Radioactive material spread on surfaces where it is not supposed to be. [FEMA Radiological Emergency Management Glossary]

**Contaminated Area.** Any area meeting the definition of Contamination Area, High Contamination Area, or Airborne Radioactivity Area provided in 10 CFR 835.2(a). [DOE G 441.12-1]

**Contractor.** A non-federal party to a DOE contract, engaging in activities or operations involving hazards which could potentially affect the health and safety of employees or the public or the quality of the environment. [DOE G 151.1-1]

**Contracting Officer.** A federal Government official who, in accordance with DOE or agency procedures, currently is designated as a contracting officer with the authority to enter into and administer contracts, financial assistance awards, and sales contracts and make determinations and findings with respect thereto, or any part of such authority. The term also includes the designated representative of the contracting officer acting within the limits of his/her authority. [Draft DOE Glossary]

**Contracting Officer's Representative.** A federal government employee formally designated to act as an authorized representative of the contracting officer for specified functions, such as technical monitoring, which do not involve a change in the scope, price, terms, or conditions of a contract or financial assistance instrument. [Draft DOE Glossary]

**Control Cell.** A simulation center located away from the responders. It is staffed by experienced controllers (and/or actors) who simulate or role-play non-participating organizations by providing input to responders, via telephone, on behalf of any non-participating individuals, companies, agencies, or ERO members who would normally be involved in responding to an emergency. Role-players in a control cell are subject to evaluation of their performance just like any other exercise controller. [DOE G 151.1-1, Vol. 7]

**Control Rod.** A rod made of neutron absorbing material which, when inserted into a nuclear reactor, reduces the number of free neutrons available to cause the uranium atoms to fission. [FEMA Radiological Emergency Management Glossary]

**Controllers.** Individuals who provide direction and control of the exercise. They monitor the sequence of events as they unfold, and are responsible for exercise safety within their span of control. Individual controllers may initiate certain actions in order to ensure the continuity of events described in the exercise scenario. It is their responsibility to ensure that responders *do not* respond in a manner that might jeopardize safety and that responders remain focused on exercise play that demonstrates the exercise objectives. The control organization will vary in number depending on the exercise scope and may include the following controller positions. [DOE G 151.1-1, Vol. 7]

**Cooling Tower.** A heat exchanger used to cool the water used to condense exhaust steam exiting the turbines of a power plant. Cooling towers transfer exhaust heat into the air instead of into a body of water. [FEMA Radiological Emergency Management Glossary]

**Corrective Actions.** Those measures taken to terminate or mitigate the consequence of an emergency at or near the source of the emergency. [DOE G 151.1-1]

**Counterterrorism.** Programs and activities, offensive in nature, taken to prevent, deter, and respond to terrorism. [EMI SIG Glossary Task Group]

**Courier.** A DOE employee or member of the Armed Forces assigned to and performing duties under the direction and control of the DOE, who is specifically designated for armed protection in transit of Top Secret or other matter, that requires such protection. [Draft DOE Glossary]

**Cross-Certification.** The process for the exchange of clearance information and need-to-know verification when DOD and DOE personnel are engaged in the exchange of classified nuclear weapon information that includes Restricted Data. [Draft DOE O 471.XX]

**Critical Nuclear Weapon Design Information.** Department of Defense marking for **Top Secret Restricted Data** or **Secret Restricted Data** revealing the theory of operation or design of the components of a thermonuclear or implosion-type fission bomb, warhead, demolition munitions, or test device. Specifically excluded is information concerning arming, fusing, and firing systems; limited life components; and totally contained quantities of fissionable, fusionable, and high-explosive materials by type. Among these excluded items are the components that military personnel, including contractor personnel, set, maintain, operate, test, or replace. [Draft DOE Glossary ]

**Crisis Management.** Planning, preventive, and response activities for addressing the causes of a terrorist incident; these activities include proactive measures for: prevention; crisis mitigation, operational response; and, criminal prosecution. [EMI SIG Glossary Task Group]

**Criticality Accident.** The release of energy as a result of accidentally producing a self-sustaining or divergent fission chain reaction (also called "Nuclear Criticality Accident.") [Draft DOE Glossary]

**Curie (Ci).** The unit of radioactivity equal to  $3.7 \times 10^{10}$  disintegrations per second or  $3.7 \times 10^{10}$  becquerel. [FEMA Radiological Emergency Management Glossary]

**Damage Ratio (DR).** The fraction of the MAR impacted by the actual accident-generated conditions under evaluation. [DOE G 151.1-1]

**Decay Heat.** The heat generated by the radioactive decay of fission products. [FEMA Radiological Emergency Management Glossary]

**Declassification.** a. The authorized change in the status of classified information to unclassified information. b. The determination that classified information no longer requires, in the interest of national security, any degree of protection against unauthorized disclosure, together with removal or cancellation of the classification designation, as follows: (1) Information is a determination by appropriate authority in accordance with approved classification policy that information is no longer classified; or (2) Documents or Material is a determination by appropriate authority in accordance with approved classification guidance that a classified document or material no longer contains classified information. A determination by appropriate authority that information no longer requires classification protection or that a previously classified document or material is no longer classified. [Draft DOE Glossary]

**Declassifier.** One authorized to downgrade or declassify documents or material in specified areas. [Draft DOE Glossary]

**Decommissioning.** The process of closing and securing a facility or storage facility with radioactive or hazardous material so as to provide adequate protection from radiation and hazardous material exposure and to isolate radioactive contamination and hazardous material from the human environment. (DOE 5480.30) [DOE-EM-STD-5502-94]

**Decontamination.** The act of removing a chemical, biological, or radiological contaminant from, or neutralizing its potential effect on a person, object or environment by washing, chemical action, mechanical cleaning, or other techniques. [Draft DOE Glossary] [DOE-EM-STD-5502-94]

**Deep Dose Equivalent (DDE).** The dose equivalent derived from external radiation at a tissue depth of 1 cm in tissue. [DOE G 151.1-1]

**Defective Item, Material, or Service.** Any item, material, or service that does not meet the commercial standard or procurement requirements as defined in catalogues, proposals, procurement specifications, design specifications, testing requirements, contracts, or the like. It includes those items or services found, during acceptance testing, preoperational testing, operations, inspections, or audit, not to meet the quality or reliability requirements appropriate to the use or specificity of the item or service procured. It also includes misrepresentation of the specifications or trademarks associated with the parts/service marking, packaging, or certification/identification stamps. It does not include parts or services that fail or are otherwise found to be inadequate because of random failures or errors within the accepted reliability level. [DOE O 232.1A and DOE M 232.1-1A]

**Defense Coordinating Officer (DCO).** Supported and provided by the Department of Defense (DOD) to serve in the field as the point of contact to the Federal Coordinating Officer (FCO) and the ESFs regarding requests for military assistance. The DCO and staff coordinate support and provide liaison to the ESFs. [FEMA Website, Appendix B]

**Defense-in-Depth.** The nuclear power plant design basis used to ensure maximum protection of the environment from an inadvertent release of fission products. [FEMA Radiological Emergency Management Glossary]

**Defense Technical Information Center (DTIC).** The central facility of the DOD for secondary distribution of technical documents generated by research, development, test, and evaluation efforts sponsored by the Department of Defense. [Draft DOE O 471.XX]

**Department of Energy (DOE) Emergency Management System.** (See Comprehensive Emergency Management System).

**Deposition.** Physical settling or placing of radioactive material onto a surface. Fallout may be deposited on surfaces. Material ingested or inhaled by an individual may be deposited in the lungs or other organs. [FEMA Radiological Emergency Management Glossary]

**Dermal Toxicity.** Adverse effects resulting from skin exposure to a substance. [Union Pacific Railroad Environmental Terms Glossary]

**Design Basis.** The set of requirements that bound the design of systems, structures, and components within the facility. These design requirements include consideration of safety, plant availability, efficiency, reliability, and maintainability. Some aspects of the design basis are important to safety, although others are not. [DOE G 151.1-1]

**Design Basis Accidents (DBAs).** Accidents that are postulated for the purpose of establishing functional requirements for safety significant structures, systems, components, and equipment. [DOE G 151.1-1]

**Design Basis Threat.** A statement that describes threats that are postulated for the purpose of establishing requirements for safeguards and security programs, systems, components, equipment, information, or material. [Draft DOE Glossary ]



## Emergency Management Terms: Glossary

**Designated Area.** The geographical area designated under a Presidential major disaster declaration that is eligible to receive disaster assistance in accordance with the provisions of Public Law (P.L.) 93-288, as amended. [FEMA Website, Appendix B]

**Disaster Field Office (DFO).** The office established in or near the designated area to support federal and state response and recovery operations. The DFO houses the FCO and the Emergency Response Team (ERT), and where possible, the State Coordinating Officer (SCO) and support staff. [FEMA Website, Appendix B]

**Disqualification.** The loss of formal qualification for radiological control technicians (RCTs) or the process of designating radiological workers (RWs) as needing additional training prior to task assignment because of one or more of the following: insufficient or unsatisfactory performance of proficiency requirements, lapse of periodic requalification (for RCTs) or retraining (for radiological workers) requirements, or serious job-performance deficiencies resulting in unsafe radiological conditions. [DOE G 441.12-1]

**DOE Complex-wide Lessons Learned Program.** The collection of DOE and contractor organizational lessons learned programs sharing information to improve performance. [DOE-STD-7501-95]

**DOE Facility Representative.** For each major facility or group of lesser facilities, an individual, or designee, assigned responsibility by the Head of the Field Element/Operations Organization for monitoring the performance of the facility and its operations. This individual should be the primary point of contact with the contractor and will be responsible to the appropriate Secretarial Officer and Head of the Field Element/Operations Organization for implementing occurrence reporting requirements. [Draft DOE Glossary ]

**DOE Field Element.** DOE Operations/Field Offices, Power Marketing Administrations, and where applicable, DOE Area Offices subordinate to Operations/Field Offices. [DOE 5500.1B]

**Dose.** A general term denoting the quantity of radiation or energy absorbed. Dose may refer to absorbed dose, the amount of energy deposited per unit mass, or to the equivalent dose (the absorbed dose adjusted for the relative biological effect of the type of radiation being measured.) [FEMA Radiological Emergency Management Glossary]

**Dose Rate.** The radiation dose delivered per unit time. [FEMA Radiological Emergency Management Glossary]

**Dosimeter.** A portable device that measures total radiation dose received. [FEMA Radiological Emergency Management Glossary]

**Downgrading.** A determination by appropriate authority that: (1) information may be handled at a level lower than the original classification level, or (2) documents or material may be handled at a level and/or category lower than the original classification level and/or category. In either case, the revised classification level shall not be lower than Confidential. [Draft DOE Glossary]

**Drill.** Supervised, "hands-on" training for members of emergency response organizations. [DOE O 151.1, Ch. IV, IV-5.]

**Early Lethality Threshold.** See **Threshold for Early Lethality**.

**Effective Dose Equivalent (EDE)(H<sub>E</sub>).** The summation of the products of the dose equivalent received by specified tissues of the body (H<sub>T</sub>) and the appropriate weighting factor (W<sub>T</sub>) - that is (H<sub>E</sub> = W<sub>T</sub>H<sub>T</sub>). It includes the dose from radiation sources internal and/or external to the body. The effective dose equivalent is expressed in units of rem. [DOE G 151.1-1] [10 CFR 835.2]

**Emergency.** An emergency is the most serious event and consists of any unwanted operational, civil, natural-phenomenon, or security occurrence that could endanger or adversely affect people, property, or the environment. [DOE G 151.1-1] ( An emergency, as used in DOE O 232.1A and DOE M 232.1-1A, has the same meaning as an Operational Emergency.)

**Emergency.** As defined at Title V of P.L. 93-288, Section 102(1), an emergency is any occasion or instance for which, in the determination of the President, federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety. Title V includes authority for the President to direct federal agencies to provide emergency assistance to save lives and protect property and public health and safety for emergencies other than natural disasters.

Under Title V, the President may direct the provision of emergency assistance either at the request of a Governor (Section 501(a)) or upon determination by the President that an emergency exists for which the primary responsibility for response rests with the United States (501(b)). This definition deals with actions that are taken under the federal Response Plan. [FEMA Website, Appendix B]

**Emergency Action Level (EAL).** Specific, predetermined, observable criteria used to detect, recognize, and determine the emergency class of Operational Emergencies. They are based on consequence estimates and evaluations performed using information from the Hazards Assessment. [DOE G 151.1-1]

**Emergency Assessment Resource Manual (EARM).** The EARM represents a sitewide TIA tool consisting of multiple sections, one for each facility that requires a Hazards Assessment. [DOE G 151.1-1, Vol. 4]

**Emergency Assistance Planning and Preparedness.** The preparation for deployment of Departmental resources, emergency response assets, and personnel, and/or use of facilities to support federal interagency plans, Presidential direction, and state, local, or tribal agreements of mutual aid. Emergency Assistance may be implemented coincident with an Energy Emergency response. [DOE O 151.1]

**Emergency Assistance Program.** All activities whereby Departmental resources, emergency response assets, personnel, and/or facilities are deployed in support of federal interagency plans, international agreements, Presidential direction, and state, local, or tribal agreements of mutual aid. The Emergency Assistance Program may be implemented coincident with implementation of the Energy Emergency Program (Chapter VI). [DOE O 151.1]



## Emergency Management Terms: Glossary

**Emergency Assistance Response.** Response to events requiring DOE Emergency Assistance shall be directed to appropriate DOE Headquarters elements. DOE responsibilities for Emergency Assistance are delineated within interagency federal response and recovery plans, Executive Orders, and/or international agreements. DOE Headquarters shall monitor such events for changing requirements, brief the White House and Congressional offices, and develop options for continuing Departmental operations and missions. [DOE O 151.1]

**Emergency Class.** Used to differentiate an operational emergency involving hazardous materials by the degree of severity, depending on the actual or potential consequence of the emergency situation; the classes are: Alert, Site Area Emergency, and General Emergency. [DOE G 151.1-1]

**Emergency Facilities.** Facilities that are used support an emergency response. [DOE G 151.1-1, Vol. 1]

**Emergency Facilities and Equipment.** The facilities, equipment, and supplies that should be established and maintained for adequate emergency response support. [DOE G 151.1-1, Vol.]

**Emergency Equipment.** Equipment and supplies that are used to support an emergency response. [DOE G 151.1-1, Vol. 1]

**Emergency Management Advisory Committee (EMAC).** The EMAC provides support to the Director of Emergency Management in identifying and resolving Department-wide emergency management issues. [DOE G 151.1-1]

**Emergency Management Exercises.** Evaluated demonstrations of the integrated capabilities of emergency response resources (personnel, procedures, facilities, and equipment) conducted for the purpose of validating elements of an emergency management program. Exercises should be realistic simulations of emergencies to include command, control, and communication functions and event-scene activities and may vary significantly in size and complexity to achieve their respective purposes. [DOE G 151.1-1, Vol. 7]

**Emergency Management Institute (EMI).** FEMA's national training center in Emmitsburg, Maryland. [EMI SIG Glossary Task Group]

**Emergency Management Guide (EMG).** Non-mandatory guidance developed to assist all DOE facilities/sites, activities, and operations, and all DOE organizational levels (facility/site, Field/Operations Office, and Headquarters offices) during the implementation of the DOE comprehensive EMS requirements. EMGs provide acceptable approaches to emergency planning, preparedness, response, recovery and readiness assurance activities at DOE facilities and sites, including DOE transportation activities, Operations/Field Offices, and DOE Headquarters offices. [DOE G 151.1-1, Vol. 1]

**Emergency Management System.** (See Comprehensive Emergency Management System.)



## Emergency Management Terms: Glossary

**Emergency Management Team (EMT).** The Emergency Response Organization (ERO) component formed to manage response actions during emergencies involving DOE facilities or requiring DOE assistance. At each response tier (facility, Field, and HQ), the EMT provides for overall management, direction, and control of the emergency response and normally operates from a command center or Emergency Operations Center (EOC). [DOE G 151.1-1, Vol. 3]

**Emergency Operating Records.** Vital records, regardless of media, that are essential to the continued functioning or reconstitution of an organization during and after an emergency. [DOE O 151.1]

**Emergency Operating Records Protection Program.** A program 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 36 CFR 1236. [DOE O 151.1]

**Emergency Operations Center (EOC).** A central facility from which management and support personnel carry out coordinated emergency response activities. [DOE 5500.1B]

**Emergency Plan.** The emergency plan documents the emergency management program and describe the provisions for response to an Operational Emergency. It contains a brief, clear, and concise description of the overall emergency organization, designation of responsibilities, and procedures, including notifications, involved in coping with any or all aspects of a potential credible operational emergency. [DOE O 151.1] [DOE G 151.1]

**Emergency Plan Implementing Procedures.** Emergency Plan Implementing Procedures describe how emergency plans are implemented. [DOE O 151.1]

**Emergency Planning.** The identification of hazards and threats, hazard mitigation, development and preparation of emergency plans and procedures, and identification of personnel and resources needed for an effective response. [DOE O 151.1] [DOE G 151.1-1]

**Emergency Planning Zone (EPZ).** The EPZ is the geographic area surrounding the site/facility for which special planning and preparedness actions are taken or need to be taken to reduce or minimize the impact to onsite personnel and public health and safety in the event of an Operational Emergency involving hazardous materials. [DOE O 151.1]

**Emergency Power Systems.** The auxiliary power systems that provide power to safety and security related equipment during periods of partial or total power failure of associated primary power system. [Draft DOE Glossary]

**Emergency Preparedness.** The acquisition and maintenance of resources, training, drills, and exercises. [DOE O 151.1] [DOE G 151.1-1]

**Emergency Public Information.** Information that is communicated to the public and the media about potential hazards and emergency planning as well as information that is communicated to mitigate the impact of an actual emergency on workers, the public, and the environment [DOE G 151.1-1, Vol. 1]





## Emergency Management Terms: Glossary

**Emergency Public Information Plan.** A plan covering a specific facility or multiple facilities located on a contiguous site, which provides: (1) Identification of personnel, resources, facilities, and coordination procedures necessary to provide emergency public information. (2) Training and exercises for Joint Information Center personnel. (3) A methodology for informing workers and the public of DOE emergency plans and protective actions, before and during emergencies. (4) Coordination of public information efforts with state, local, and tribal governments, and federal emergency response plans, as appropriate. [DOE O 151.1]

**Emergency Readiness Assurance Plan (ERAP).** The facility's five-year plan to ensure that site emergency plans, implementing procedures, and resources are adequate and sufficiently maintained, exercised, and evaluated. [DOE G 151.1-1, Vol. 1]

**Emergency Response.** The application of resources to mitigate consequences to workers, the public, the environment, and the national security, and the initiation of recovery from an emergency. [DOE O 151.1]

**Emergency Response Organization (ERO).** The organizational structure of the Comprehensive Emergency Management System including the establishment and maintenance of the DOE Headquarters Emergency Management Team (EMT), Field Element emergency response staff, and facility/site ERO during normal operations, the functions of the on-shift emergency organization, and the staffing of a full facility/site response organization following declaration of an emergency; clearly specified authorities and responsibilities; and the configuration and staffing in terms of initial response and staff augmentation during the emergency. [DOE G 151.1-1, Vol. 1] All personnel who may be needed to perform duties, beyond those specified by 29 CFR 1910.120 for the first responder awareness level, during a response to any of the broad range of emergencies defined in the Hazards Survey or assessment are members of the ERO. [DOE G 151.1-1, Vol. 3]

**Emergency Response Planning Guidelines (ERPGs).** Values, developed under the auspices of the American Industrial Hygiene Association, intended to provide estimates of concentration ranges where one reasonably might anticipate observing adverse effects as described in the definitions of ERPG-1, ERPG-2 and ERPG-3 as a consequence of exposure to a specific non-radioactive hazardous substance. [DOE G 151.1-1]

**ERPG-1** is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing other than mild transient adverse health effects or perceiving a clearly defined, objectionable odor.

**ERPG-2** is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.

**ERPG-3** is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing life-threatening health effects.

Regulations, such as 29 CFR 1910.38, require **employee emergency action plans**, including “procedures to account for all employees after emergency evacuation has been completed.” [DOE G 151.1-1, Vol. 4, Program Elements (2), 8-21-97] [Draft DOE Glossary ]

**Emergency Response Team (ERT).** An interagency team, consisting of the lead representative from each federal department or agency assigned primary responsibility for an ESF and key members of the FCO's staff, formed to assist the FCO in carrying out his/her coordination responsibilities. The ERT provides a forum for coordinating the overall federal response, reporting on the conduct of specific operations, exchanging information, and resolving issues related to ESF and other response requirements. ERT members respond to and meet as requested by the FCO. The ERT may be expanded by the FCO to include designated representatives of other federal departments and agencies as needed. [FEMA Website, Appendix B]

**Emergency Support Function (ESF).** A functional area of response activity established to facilitate the delivery of federal assistance required during the immediate response phase of a disaster to save lives, protect property and public health, and to maintain public safety. ESFs represent those types of federal assistance which the state will most likely need because of the overwhelming impact of a catastrophic or significant disaster on its own resources and response capabilities, or because of the specialized or unique nature of the assistance required. ESF missions are designed to supplement state and local response efforts. [FEMA Website, Appendix B]

**Emergency Support Team (EST).** An interagency group operating from the Federal Emergency Management Agency (FEMA) headquarters. The EST oversees the national-level response support effort and coordinates activities with the ESF primary and support agencies in supporting federal response requirements in the field. [FEMA Website, Appendix B]

**Energy Emergency.** Any significant deviation from a planned or expected course of events that could endanger or adversely affect people, property, or the environment (but excluding the internal operations of the Power Marketing Administrations). Energy emergencies encompass, but are not limited to, supply crises caused by international political causes (e.g., embargo), defense mobilization, natural disasters, energy system sabotage, major accidents, and labor strikes or lock outs. [Draft DOE Glossary]

**Energy Yield.** The total effective energy released in a nuclear explosion. [FEMA Radiological Emergency Management Glossary]

**Escort.** An individual with the prerequisite training necessary for unescorted access to the area(s) where the escort activities will be performed who is authorized to accompany and ensure the safety of individuals who lack such training. [DOE G 441.12-1]

**Etiological Agent.** A viable microorganism or its toxin, which causes or may cause human disease; limited to the agents identified in Title 42 CFR Part 72. [Union Pacific Railroad Environmental Terms Glossary]

**Exclusion Zone (EZ).** The contaminated area of a site. [Union Pacific Railroad Environmental Terms Glossary]



## Emergency Management Terms: Glossary

**Evacuation.** A protective action that calls for the controlled relocation of personnel from a hazardous or potentially hazardous area. [DOE G 151.1-1]

**Evaluation.** The process of validation or identification of weaknesses and/or findings in emergency management programs. Evaluations are performed by the Director of Emergency Management. [DOE O 151.1, Ch. X.]

**Evaluation Critique.** This critique session generally occurs the day following the exercise and includes participation by all controllers and evaluators. This critique should provide the forum for discussion and correlation of individual observations, the formulation of exercise findings, determination of objectives demonstrated, and determination of overall exercise performance. Recommendations for corrective and improvement actions should be addressed. [DOE G 151.1-1, Vol. 6]

**Evaluators.** Individuals who document and evaluate responder performance and the adequacy of facilities and equipment against established emergency plans and exercise evaluation criteria. [DOE G 151.1-1, Vol. 3]

**Event.** Any real-time occurrence or significant deviation from planned or expected behavior that could endanger or adversely affect people, property, or the environment. [DOE G 151.1-1]

**Event Categorization.** The process of determining the category into which an event falls, i.e., Emergency, Unusual Occurrence, and Off-Normal Event. [DOE G 151.1-1, Vol. 1]

**Event Classification.** The process of determining the severity of an Operational Emergency involving hazardous materials. Operational Emergency classes, in order of decreasing severity are: General Emergency, Site Area Emergency, and Alert. [DOE G 151.1-1, Vol. 1]

**Events Requiring Classification.** An Operational Emergency involving the **loss of control over hazardous materials** (i.e., involving an actual or potential airborne release to the environment, that is, outside a structure or enclosure on a DOE facility or site). The emergency response to such an event can benefit from a classification scheme that is based on the severity of potential consequences at specific distances from the source of the release. [DOE G 151.1-1, Vol. 1]

**Events That Do Not Require Classification.** Operational Emergency events or conditions, which do not involve the loss of control over hazardous materials. [DOE G 151.1-1, Vol. 1]

**Events That Do Not Require Further Classification.** Events that occur that represent a significant degradation in the level of safety at a site/facility and that require time-urgent response efforts from outside the site/facility. These events do not require further classification (i.e., as Alert, Site Area Emergency, or General Emergency). [DOE O 151.1, Ch. V, Sect. 2]

**Executive Team.** Team that provides strategic direction to the Department and evaluates the emergency's impact on Departmental operations, missions, and functions. [DOE O 151.1]

**Exercise.** Evaluated demonstration of the integrated capabilities of emergency response resources (personnel, procedures, facilities, and equipment) conducted for the purpose of validating elements of an emergency management program. [DOE O 151.1]

**Exercise Boundaries.** The boundaries of the area involved in the exercise. Specific exercise boundaries are discussed and depicted on maps in the exercise package. [DOE G 151.1-1, Vol. 6]

**Exercise Evaluation.** A mechanism for evaluating the ability of an organization to respond to a simulated emergency. It includes selected document review, player briefing, evaluation of controller training, observations of exercise performance, exercise critique sessions, and identification of potential findings. [DOE G 151.1-1, Vol. 6]

**Exercise Evaluation Criteria.** A set of criteria that can be used to evaluate a DOE emergency management program exercise. This list of criteria, organized by functional area and program element, can be used to develop an exercise and facility/site-specific set. [Base Program: Introduction] [DOE G 151.1-1, Vol. 1]

**Exercise Objective Matrix.** A tool to facilitate administration of the exercise program. The matrix should identify all programmatic exercise objectives and correlate with facility/site-specific hazards and the specific objectives to be demonstrated in individual exercises. The matrix should support/document validation of Emergency Management Program elements over a multi-year period. [DOE G 151.1-1, Vol. 7]

**Exercise Setup.** Exercise setup includes setting up simulations, preparing scenes and visual areas (e.g., smoke generators, simulated spills, actor moulage, etc.), performing controller communications checks, conducting responder initial conditions briefings, synchronizing clocks, initializing computer simulation data, and other scenario-specific activities. Exercise setup should be carefully planned to ensure that all logistics necessary to conduct the exercise are checked before the exercise begins. [DOE G 151.1-1, Vol. 7]

**Explosion.** The rapid release of a large amount of energy within a limited space. [FEMA Radiological Emergency Management Glossary]

**Explosive.** A chemical that is capable of burning or bursting suddenly or violently. [Union Pacific Railroad Environmental Terms Glossary]

**Explosive Limits.** Some items have a minimum and maximum concentration in air which can be detonated by spark, shock, fire. The lowest concentration is known as the lower explosive limit (LEL). The highest concentration is known as the upper explosive limit (UEL). [Union Pacific Railroad Environmental Terms Glossary]

**Exposure.** A measurement of the total amount of radiation to which an individual is exposed related to the ionization produced in air by x-ray or gamma radiation. Similar to "dose." [FEMA Radiological Emergency Management Glossary]

**External Departmental Organizations.** An organizational entity beyond that of the immediate facility/site conducting the exercise, including the cognizant Operations Office and the Headquarters Office of Emergency Management. [DOE G 151.1-1, Vol. 7]

**External Evaluation.** Evaluation by a DOE organization outside the immediate facility organization. Departmental elements with oversight responsibilities (both Field Elements and Headquarters elements) should coordinate external evaluations so that they are conducted at least every three years. [DOE G 151.1-1, Vol. 7]

**Extreme Scenarios.** Those scenarios used in vulnerability assessments and/or radiological and toxicological sabotage assessments, should provide the analyst with an upper bound on the severity of potential consequences. [DOE G 151.1-1, Vol. 2]

**Extremely Hazardous Substance (EHS).** EPA applies the term extremely hazardous substance to chemicals that must be reported to the appropriate authorities if released above the threshold reporting quantity. Each substance has a threshold reporting quantity. [Union Pacific Railroad Environmental Terms Glossary]

**Facility.** [Draft DOE Glossary]

- a. (Field Management) The buildings, utilities, structures, and other land improvements associated with an operation or service and dedicated to a common function.
- b. (Environment, Safety and Health) Any equipment, structure, system, process, or activity that fulfills a specific purpose. Examples include accelerators; storage areas; explosive operations; fusion research devices; nuclear reactors; production or processing plants; coal conversion plants; magneto-hydrodynamics experiments; windmills; radioactive waste disposal systems; and burial grounds; environmental restoration activities; testing laboratories; research laboratories; transportation activities; and accommodations for analytical examinations of irradiated and unirradiated components.
- c. (Nonproliferation and National Security) An educational institution, manufacturing plant, laboratory, office building, or complex of buildings located on the same site that is operated and protected as one unit by DOE or its contractor(s).
- d. (Waste Management) All contiguous land, structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of waste or spent nuclear fuel.

**Facility Manager.** That individual, or designee, usually but not always a contractor, with direct line responsibility for operation of a facility or group of related facilities, including authority to direct physical changes to the facility. [DOE O 232.1A and DOE M 232.1-1A]

**Federal Coordinating Officer (FCO).** The senior federal official appointed in accordance with the provisions of P.L. 93-288, as amended, to coordinate the overall response and recovery activities. The FCO represents the President as provided by Section 303 of P.L. 93-288, as amended, for the purpose of coordinating the administration of federal relief activities in the designated area. Additionally, the FCO is delegated responsibilities and performs those for the FEMA Director as outlined in Executive Order 12148 and those responsibilities delegated to the FEMA Regional Director in Title 44 Code of Federal Regulations, Part 205. [FEMA Website, Appendix B]



## Emergency Management Terms: Glossary

**Federal Radiological Emergency Response Plan (FRERP).** National plan (Title 61) developed jointly by federal agencies to guide federal response to a peacetime radiological emergency. [DOE O 151.1-1]

**Federal Response Plan (FRP).** A document published by the Federal Emergency Management Agency to fulfill requirements established in Public Law 93-288, as amended. The FRP provides a framework for coordinated federal response in support of state and local governments. [DOE O-151.1-1]

**Federal Emergency Management Agency (FEMA).** An independent agency of the federal government with a mission to reduce life and property and protect our Nation's infrastructure through an emergency management program of mitigation, preparedness, response, and recovery. [EMI SIG Glossary Task Group]

**Field of Interest Register.** A method used by the Department of Defense to authorize automatic distribution of documents from the Defense Technical Information Center. Access is controlled by subject category and by classification level. [Draft DOE O 471.XX]

**Final Emergency Report.** The report, separate from the Final Occurrence Report, that describes the activities and lessons learned during the response to an Operational Emergency. [DOE O 151.1]

**Finding.** A statement of fact, based on objective evidence and criteria by which the functional area or performance was evaluated. [DOE G 151.1-1, Vol. 6]

**Fission.** The splitting of an atom resulting in the release of neutrons, energy, and two or more smaller atoms. [FEMA Radiological Emergency Management Glossary]

**Fission Product.** An atom produced through the splitting (fissioning) of a larger atom. [FEMA Radiological Emergency Management Glossary]

**First Responder.** The first trained personnel to arrive on the scene of a HAZMAT incident.; usually officials from local emergency services, such as firefighters and police. [Union Pacific Railroad Environmental Terms Glossary]

**Flammable.** Capable of being easily ignited and/or burning with extreme rapidity, and has a flashpoint under 100 degrees F. [Union Pacific Railroad Environmental Terms Glossary]

**Flammable Gas.** Materials considered by the DOT as flammable: gases having a Lower Explosive Limit of less than 13% or gases having flammable range wider than 12 percentage points. [Union Pacific Railroad Environmental Terms Glossary]

**Flammable (Explosive) Limits.** The concentration of a gas that will burn in air. The Lower Explosive Limit (LEL) is the lowest percentage of a gas that will burn in air. The Upper Explosive Limit (UEL) is the highest percentage of a gas that will burn in air. [Union Pacific Railroad Environmental Terms Glossary]

**Flash Point.** The minimum temperature at which a liquid gives off enough vapors to form an ignitable mixture with the air near the surface of the liquid. [Union Pacific Railroad Environmental Terms Glossary]

**Formerly Restricted Data (FRD).** Classified information: (1) jointly determined by DOE and DOD to be related primarily to the military utilization of atomic weapons, (2) removed by DOE from the Restricted Data category pursuant to Section 142(d) of the Atomic Energy Act of 1954, as amended, and (3) safeguarded as National Security Information subject to the restrictions of transmission to other countries and regional defense organizations that apply to Restricted Data. [Draft DOE O 471.XX]

**Full Participation Exercise.** An exercise for a particular DOE- or contractor-operated facility that demonstrates the integrated response capability of the facility emergency response organization, the DOE Program Office elements (both Headquarters and Field Element) with responsibilities for emergency response, along with those regional federal, state, tribal, and local government agencies, regional/area utilities, and private support organizations that elect to participate. [Draft DOE Glossary]

**Gamma Radiation.** An electromagnetic wave with intensely high energy that originates in the atomic nucleus. These waves are extremely penetrating and are best absorbed by a very dense materials such as lead. [Union Pacific Railroad Environmental Terms Glossary]

**Gamma Rays.** High-energy, short wavelength electromagnetic radiation emitted from the nucleus. Gamma radiation frequently accompanies alpha and beta emissions and always accompanies fission. Gamma rays are very penetrating and are best stopped or shielded against by dense materials such as lead or uranium. Gamma rays are similar to X rays, but are usually more energetic. [FEMA Radiological Emergency Management Glossary]

**Gray (Gy).** The absorbed radiation dose unit of the international system of units. One gray equals 100 rad. [FEMA Radiological Emergency Management Glossary]

**General Emergency.** An event predicted, in progress, or having occurred that result in one or more of the following situations. [DOE O 151.1]

(1) Actual or imminent catastrophic reduction of facility safety or security systems with potential for the release of large quantities of hazardous materials (radiological or non-radiological) to the environment. 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 Guide or Emergency Response Planning Guideline at or beyond the site boundary.

(2) 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.

**Good Work Practice.** A positive lesson or action that has the potential to be the basis of significant improvements or cost savings. [DOE-STD-7501-95]

**Graded Approach.** A process by which the level of analysis, documentation, and actions necessary to comply with the requirements of this part are commensurate with: (1) the relative importance to safety, safeguards, and security; (2) the magnitude of any hazard involved; (3) the life cycle stage of a facility; (4) the programmatic mission of a facility; (5) the particular characteristics of a facility; and (6) any other relevant factor. (10 CFR 830.3) [DOE-EM-STD-5502-94]

**Half-Life.** The time in which half the atoms of a particular radioactive material disintegrate to another nuclear form. Measured half-lives vary from millionths of a second to billions of years. See "Radioactive Decay." [FEMA Radiological Emergency Management Glossary]

**Hazard.** A source of danger (i.e., material, energy source, or operation) with the potential to cause illness, injury, or death to personnel or damage to a facility or to the environment (without regard for the likelihood or credibility of accident scenarios or consequence mitigation). (10 CFR 830.3) [DOE-EM-STD-5502-94]

**Hazard Categorization.** Evaluation of the consequences of unmitigated releases to categorize facilities or operations into the following categories: [DOE G 151.1-1]

- **Hazard Category 1** - The hazard analysis shows the potential for significant offsite consequences.
- **Hazard Category 2** - The hazard analysis shows the potential for significant onsite consequences.
- **Hazard Category 3** - The hazard analysis shows the potential for only significant localized consequences.

**Hazard Classes.** Non-nuclear facilities will be categorized as high, moderate, or low hazards based on the following [DOE 5481.1B] [DOE-EM-STD-5502-94]

1. High - hazards with a potential for onsite and offsite impacts to large numbers of persons or for major impacts to the environment,
2. Moderate - hazards which present considerable potential onsite impacts to people or the environment, but at most only minor offsite impacts, and
3. Low - hazards which present minor onsite and negligible offsite impacts to people and the environment.

**Hazardous Air Pollutant.** A pollutant to which no ambient quality standard is applicable and that may cause or contribute to an increase in mortality or in serious illness. [Union Pacific Railroad Environmental Terms Glossary]





## Emergency Management Terms: Glossary

**Hazardous Chemicals.** The U.S. Occupational Safety and Health Administration (OSHA) uses the term hazardous chemical to denote any chemical that would be a risk to employees if exposed in the work place. Hazardous chemicals cover a broader group of chemicals than the other chemical lists. [Union Pacific Railroad Environmental Terms Glossary]

**Hazardous Classes.** A series of nine descriptive terms that have been established by the U.N. Committee of Experts to categorize the hazardous nature of chemical, physical, and biological materials. These categories are flammable liquids, explosives, gases, oxidizers, radioactive materials, corrosives, flammable solids, poisonous and infectious substances, and dangerous substances. [Union Pacific Railroad Environmental Terms Glossary]

**Hazardous Materials.** Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment. [DOE G 151.1-1]

**Hazardous Material Incident.** A situation in which a hazardous material is or may be released into the environment. [Union Pacific Railroad Environmental Terms Glossary]

**Hazards Assessment.** The identification and characterization of hazardous materials specific to a facility/site, analyses of potential accidents or events, and evaluation of potential consequences. The Hazards Assessment also includes a determination of the size of the geographic area surrounding the site, known as the Emergency Planning Zone (EPZ), within which special planning and preparedness activities are required to reduce the potential health and safety impacts from an event involving hazardous materials. The Hazards Assessment provides the technical basis for the Hazardous Materials Program. [DOE G 151.1-1, Vol. 2]

**Hazards Survey.** A qualitative examination of the events or conditions specific to the facility/site which may require an emergency response. It is used to identify the generic emergency events or conditions that define the scope of the emergency management program at a facility/site. The description of the potential impacts of such events or conditions contained in the Hazards Survey determines the planning and preparedness requirements that apply. The Hazards Survey is the formal mechanism to determine the scope and extent of the Base Program. [DOE G 151.1-1, Vol. 1]

**High-risk, High-population Areas.** Heavily populated areas of the United States, particularly susceptible to high-intensity earthquakes, for which federal emergency response may be necessary in the event of an earthquake. FEMA has identified the following areas as meeting this definition: Honolulu, HI; San Diego, Los Angeles, and San Francisco, CA; Puget Sound, WA; Anchorage, AK; Salt Lake City, UT; the seven-state area of the central United States (MO, KY, TN, MS, AR, IN, IL); Charleston, SC; Boston, MA; New York; Puerto Rico; and the Virgin Islands. [FEMA Website, Appendix B]

**Hot Zone.** Area of highest chemical concentration. [Union Pacific Railroad Environmental Terms Glossary]

**Hotline.** The outer boundary of the EZ on site where highest concentration of chemicals is found. [Union Pacific Railroad Environmental Terms Glossary]

**Ignition Temperature (Auto-Ignition).** The minimum temperature required to initiate or cause self sustained combustion in a substance. The temperature that the vapors of a product must be heated to for ignition to occur. [Union Pacific Railroad Environmental Terms Glossary]

**Implementation Plan.** A document prepared by a contractor that sets forth: [10 CFR 830.3]  
[DOE-EM-STD-5502-94]

1. When and how the actions appropriate to comply with the requirements of a section of this part, including the requirements of a plan or program required by this section, shall be taken, and
2. What relief will be sought if a contractor cannot attain full compliance with a requirement in a reasonable manner

**Improvement Actions.** Actions taken to improve the efficiency of operations based on a good work practice or an innovative approach. [EMI SIG Glossary Task Group]

**Incident.** Any deviation from normal operations or activities which has the potential to result in an emergency. [DOE G 151.1-1]

**Incident Command System (ICS).** The emergency response organization at the event scene designed to deal with command, control and coordination issues in advance. [DOE G 151.1-1, Vol.3]

**Independence.** Defined as not having direct responsibilities in the areas being assessed.  
[DOE G 414.1-1]

**Ingestion.** The term used when radioactive materials are taken into the body through the mouth, such as by eating or drinking. Also applies when breathing results in the inhaled materials being swallowed. [FEMA Radiological Emergency Management Glossary]

**Inhalation.** The term used when radioactive materials are taken into the lungs by breathing.  
[FEMA Radiological Emergency Management Glossary]

**Initial Nuclear Radiation.** Nuclear radiation emitted from the fireball and the cloud column during the first minute after a nuclear explosion. [FEMA Radiological Emergency Management Glossary]

**Initial Protective Action Zone.** The area downwind from an incident in which persons may become incapacitated and unable to take protective action and/or incur serious or irreversible health effects (DOT 1996 North American Emergency Response Guidebook - NAERG96, as amended or updated.) [DOE G 151.1-1, Vol. 3]

**Injection.** The introduction of chemicals into the body through puncture. [Union Pacific Railroad Environmental Terms Glossary]

**Interconnected Customer.** Other utilities, direct service customers, military installations, cooperatives, rural electric cooperatives, irrigation districts, tribes, and municipalities that are electrically and/or contractually connected with the Power Administration. [DOE 5500.11]

**Ionization.** The process of adding one or more electrons to, or removing one or more electrons from, atoms or molecules, thereby creating ions. High temperatures, electrical discharges, or nuclear radiations are possible causes of ionization. [FEMA Radiological Emergency Management Glossary]

**Interagency Group on Energy Vulnerability.** A forum chartered under the Senior Interagency Group for National Security Emergency Preparedness pursuant to National Security Decision Directive 188, "Government Coordination for National Security Emergency Preparedness." It consists of representatives with national security emergency preparedness responsibilities. The Interagency Group on Energy Vulnerability facilitates federal government-wide coordination of national policy issues relating to the vulnerability of U.S. energy systems in advance of crises, and coordinates crisis assessments and response recommendations in an emergency. [Draft DOE Glossary]

**Integrated Appraisals.** Appraisals that may be administered and planned by DOE contractor or Headquarters offices. They may include the emergency management component, which is an aspect of a larger, multi-disciplinary examination of site compliance and performance. Examples of integrated appraisals include Operational Readiness Reviews, Operational Readiness Evaluations, Tiger Team Evaluations, and Technical Safety Appraisals. Integrated appraisals also identify problems and appropriate corrective actions. [DOE G 151.1-1, Vol. 6]

**Inventory of Interest.** For facilities where criticality accidents are considered credible, the total yield of gaseous and volatile fission products from the postulated criticality event(s). Analyses of these postulated criticality events will generally be available in the facility SAR. [DOE G 151.1-1, Vol. 2]

**Item.** DOE O 232.1A and DOE M 232.1-1A]

- a. An all-inclusive term used in place of the following: appurtenance, sample, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, unit, or support systems, documented concepts, or data.
- b. When used in reference to nuclear material, a visible, single piece or container of nuclear material with a unique identification and known nuclear material mass.

**Joint Information Center.** A facility jointly operated by DOE, DOE contractor, state, tribal, and local governments to coordinate the release of accurate and timely information to the public during and after an emergency. [Draft DOE Glossary]

**Joint Nuclear Accident Coordination Center.** A DOE/Department of Defense organization that deploys response teams in the event of a nuclear weapon accident or significant incident. [Draft DOE Glossary]

**Keyword.** A word used to convey related concepts or topics stated in the lesson; used to assist in sorting and locating lessons. [DOE-STD-7501-95]

**Leak Path Factor (LPF).** The fraction of airborne materials transported from containment or confinement deposition or filtration mechanism (e.g., fraction of airborne material in a glovebox leaving the glovebox under static conditions, or fraction of material passing through a HEPA filter). [DOE G 151.1-1]

**Lessons Learned.** A "good work practice" or innovative approach that is identified and shared, or an adverse work practice or experience that is shared to avoid recurrence. [Draft DOE Glossary] The emergency management program shall include a system to track and verify correction of findings or lessons learned from training, drills, exercises, and actual responses. [DOE O 151.1]

**Level of Concern.** The concentration of an EHS in air above which there may be serious irreversible health effects or death as a result of a single exposure for a relatively short period of time. "Levels of concern" are identified in the EPA guidance for the EHSs listed in 40 CFR 355 Appendix A. Emergency Response Planning Guidelines (ERPGs) take precedence over Levels of Concern. [DOE G 151.1-1, Vol. 2]

**Local Emergency Planning Committee (LEPC).** Group appointed by State Emergency Response Commission made up of elected state and local officials, police, fire, civil defense, public health professional, environmental, hospital, and transportation officials, as well as representatives of facilities subject to emergency planning requirements, community groups and the news media. The LEPC is responsible for preparing local emergency plan(s) that comply with Title III, Emergency Planning and Community Right-to-Know Act (EPCRA) requirements. [EPCRA Sections 301-302]

**Lost Workdays.** The number of days (consecutive or not) after, but not including, the day of injury or illness during which employees would have worked but could not do so; that is, could not perform all or any part of their normal assignment during all or any part of the workday or shift because of their occupational injury or illness. [DOE O 232.1A and DOE M 232.1-1A]

**Major Disaster.** As defined under P.L. 93-288, any natural catastrophe, (including any hurricane, tornado, storm, flood, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of states, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby. [FEMA Website, Appendix B]

**Malevolent Acts.** Acts which are performed with an intent to cause harm to others, such as sabotage or terrorism. [DOE G 151.1-1, Vol. 2]

**Mass Casualty Event.** An event in which: (1) the numbers of patients and the nature of the injuries make the normal level of stabilization and care unachievable; and/or (2) the number of Emergency Medical Service personnel that can be brought to the site within the time allowed is not enough; and/or (3) the stabilization capabilities of the hospitals that can be reached within the time allowed are insufficient to handle all the patients. [DOE G 151.1-1, Vol. 4]

**Master Interagency Agreement.** A written agreement entered into between two federal agencies for the purpose of generally defining areas of respective cooperation within their respective areas of responsibility. The Master Interagency Agreement will prescribe the policy and procedures to be applied in accomplishing or furnishing the materials and/or services to be provided pursuant to such agreement. The Master Interagency Agreement establishes the basic framework under which specific task orders can be issued pursuant to its terms and conditions. [Draft DOE Glossary]

**Master Scenario Event List (MSEL).** An MSEL lists all exercise messages and key events in a table that specifies the time the message is expected to be delivered, who delivers it to whom, a message number, and a short description of the message. Some MSELs also contain the responder-expected actions and associated exercise objectives to assist the controllers and evaluators in performing their functions. The MSEL identifies the timing and summary content of all key events, messages or injects, contingency messages, and expected responder actions for the duration of the exercise. [DOE G 151.1-1, Vol. 7]

**Material at Risk (MAR).** The MAR is the amount and type of material available to be acted on by a given physical stress. For facilities, processes, and activities, the MAR is a value representing some maximum quantity of material present or reasonably anticipated for the process or structure being analyzed. [DOE G 151.1-1]

**Material Control and Accountability.** That part of safeguards that detects or deters theft or diversion of nuclear materials and provides assurance that all nuclear materials are accounted for appropriately. [Draft DOE Glossary]

**Maximum Inventory.** The maximum inventory for a process is the maximum quantity of a hazardous material that a process produces during the process cycle. For storage tanks the maximum inventory is equivalent to the physical capacity of the tank. If a physical barrier prevents the tank from being completely filled (e.g., overflow pipe), the maximum inventory can be adjusted accordingly. [DOE G 151.1-1]

**Member of the Public.** Persons who are not occupationally associated with the DOE facility or operations; i.e., persons whose assigned occupational duties do not require them to enter the DOE site. [DOE O 232.1A and DOE M 232.1-1A]

**Meteorological Information.** Characteristics of the atmosphere (e.g., wind direction, wind speed, temperature, and precipitation) used to determine how the material will be transported through the atmosphere to the receptors, and how rapidly the receptors will be affected. [DOE G 151.1-1, Vol. 4]

**Mitigation.** Actions taken to prevent or reduce the severity of harm from a chemical release. [Union Pacific Railroad Environmental Terms Glossary]

**Moderate scenarios.** Scenarios that could be initiated by a single individual using materials or tools readily available in the facility, or small quantities of flammables. [DOE G 151.1-1, Vol. 2]

**Monitoring.** The process of measuring certain environmental parameters on a real-time basis for spatial and time variations. For example, air monitoring may be conducted with direct-reading instruments to indicate relative changes in air contaminant concentrations at various times. [Union Pacific Railroad Environmental Terms Glossary]

**Mutual Aid Response.** A mutual aid response is one in which (1) Facility first responders and facility Emergency Medical Service personnel are able to mitigate life threatening injuries in all victims to the same level that they would be able to mitigate similar injuries in a single victim; **and** (2) Within 10 to 20 minutes, enough other responders and ambulances can be at the site to provide normal levels of care and transportation; **and** (3) The hospitals that can be reached within the normally accepted time for transport of patients can provide adequate stabilization until definitive care can be provided. [DOE G 151.1-1, Vol. 4]

**National Emergency Coordination Center (NECC).** The FEMA facility that provides notification to Headquarters and Regional responders of implementation of the Plan. [FEMA Website, Appendix B]

**National Oil and Hazardous Substances Pollution Contingency Plan, or National Contingency Plan.** A national plan published in 40 CFR 300 to provide the organizational structure and procedures for federal preparation for and response to discharges of oil and releases of hazardous substances. [DOE O 151.1]

**National Security Emergency Preparedness Critical Functions.** Six critical functions that have been identified for DOE during a continuity of government emergency, as follows:

- 1) Coordinate the provision of fuel resources (i.e. coal, natural gas, crude oil, and petroleum products and their respective production/distribution systems) in support of emergency assistance/ restoration activities;
- 2) Develop a national recovery plan for fuel production/distribution;
- 3) Coordinate the provision of electric power in support of emergency assistance/restoration activities;
- 4) Coordinate the continued safe operation of nuclear power production facilities in support of emergency assistance/restoration activities;
- 5) Develop a national recovery plan for electric power production/distribution; and Restore the manufacture, assembly, transport, and control of nuclear weapons or devices. [Draft DOE Glossary]

**Natural Phenomena Hazard.** An act of nature (e.g., earthquake, wind, hurricane, tornado, flood, precipitation (rain or snow), volcanic eruption, lightning strike, or extreme cold or heat) that poses a threat or danger to workers, the public, or to the environment by potential damage to structures, systems, and components. [Draft DOE Glossary]

**Need-to-Know.** A determination, by persons having responsibility for classified information or matter, that a proposed recipient's access to such classified information or matter is necessary in the performance of official or contractual duties of employment under the cognizance of the Department of Energy. [Draft DOE O 471.XX]

**Nonreactor Nuclear Facility.** Those activities or operations that involve radioactive and/or fissionable materials in such a form and quantity that a nuclear hazard potentially exists to the employees or the general public. Incidental use and generation of radioactive materials in facility operation (e.g., check and calibration sources, use of radioactive sources in research and experimental and analytical laboratory activities, electron microscope, and X-ray machines) would not ordinarily require the facility to be included in this definition. Transportation of radioactive materials, accelerators and reactors and their operations are not included. The application of any rule to a nonreactor nuclear facility shall be applied using a graded approach. Included are activities or operations that: (10 CFR 830.3) [DOE G 151.1-1, Vol. 6]

1. Produce, process, or store radioactive liquid or solid waste, fissionable materials, or tritium;
2. Conduct separations operations;
3. Conduct irradiated materials inspections, fuel fabrication, decontamination, or recovery operations;
4. Conduct fuel enrichment operations;
5. Perform environmental remediation or waste management activities involving radioactive materials; or
6. Design, manufacture, or assemble items for use with radioactive materials and/or fissionable materials in such a form or quantity that a nuclear hazard potentially exists.

**Notification Report.** The initial documented report, to DOE, of an event or condition that meets the reporting criteria defined in the Occurrence Reporting Requirements Documents. The Notification Report should consist of fields 1 through 19 of the Occurrence Report. [Draft DOE Glossary]

**Observer Briefing.** A briefing that should occur prior to the exercise to ensure compliance with safety and security precautions and other rules of conduct. Observers may attend the controller briefing or may be provided separate briefings. [DOE G 151.1-1, Vol. 7]

**Nuclear Criticality Accident.** See **Criticality Accident.** [Draft DOE Glossary]

**Nuclear Criticality Safety.** The prevention or termination of inadvertent nuclear criticality, mitigation of consequences, and protection against injury or damage due to accidental nuclear criticality. Protection from the consequences of a criticality accident, preferably by prevention of the accident. This encompasses procedures, training, and other precautions, in addition to physical protection. [Draft DOE Glossary]

**Nuclear Emergency Search Team.** A DOE group of experts assigned responsibility to provide assistance in nuclear threat emergencies for the search and identification of any ionizing radiation-producing materials that may have been lost or stolen or may be associated with bomb threats or radiation dispersal threats. [Draft DOE Glossary]

**Nuclear Facility.** A facility (e.g., Savannah River, Oak Ridge, etc.) for the production, utilization, storage or handling of Special Nuclear Material, including irradiated material that is of national security significance. [Draft DOE Glossary]

**Nuclear Weapon Accident.** An unexpected event involving nuclear weapons or nuclear components that results in accidental or unauthorized launching, firing, or use of a nuclear capable weapon system; accidental, unauthorized, or unexplained nuclear detonation; non-nuclear detonation or burning of a nuclear weapon or nuclear component; radioactive contamination; jettisoning of a nuclear weapon or nuclear component; or public hazard, actual or perceived. [Draft DOE Glossary]

**Nuclear Weapon Incident.** An unexpected event involving a nuclear weapon, facility, or component resulting in any of the following, but not constituting a nuclear weapon(s) accident: 1) An increase in the possibility of explosion or radioactive contamination; 2) Errors committed in the assembly, testing, loading, or transportation of equipment, and/or the malfunctioning of equipment and material that could lead to an unintentional operation of all or part of the weapon arming and/or firing sequence, or which could lead to a substantial change in yield, or increased dud probability; or 3) Any act of God, unfavorable environment, or condition resulting in damage to a weapon, facility, or component. [Draft DOE Glossary]

**Nuclear Weapon Information (NWI).** Restricted Data (RD) or Formerly Restricted Data (FRD) concerned with the design, manufacture, or utilization of: (1) atomic weapons, (2) atomic weapon components, or (3) atomic explosive devices. Nuclear Weapon information includes theory, development, storage, characteristics, performance, and effects of such items. (All nuclear weapon information is RD or FRD but not all RD or FRD is nuclear weapon information.) [Draft DOE O 471.XX]

**Occurrence.** An event or a condition that adversely affects, or may adversely affect, DOE or contractor personnel, the public, property, the environment, or the DOE mission. Events or conditions meeting the criteria threshold identified in DOE M 232.1-1A are occurrences. [DOE O 232.1A and DOE M 232.1-1A]

**Occurrence Investigation.** Investigations conducted according to site specific procedures and when determined by DOE that a Type A or B is required by DOE procedures. [DOE O 232.1A and DOE M 232.1-1A]

**Occurrence Report.** A documented evaluation of an event or condition that is prepared in sufficient detail to enable the reader to assess its significance, consequences, or implications and to evaluate the actions being proposed or employed to correct the condition or to avoid recurrence. [Draft DOE Glossary]

**Off Normal Occurrence.** An abnormal or unplanned event or condition that adversely affects, potentially affects, or is indicative of degradation in the safety, security, environmental or health protection performance or operations of a facility. [Draft DOE Glossary]

**Offsite.** The area beyond the boundaries of the site. [DOE G 151.1-1]



**Offsite Response Interfaces.** The provisions that should be in place for interface and coordination with federal, state, tribal, and local agencies and organizations responsible for offsite emergency response and for protection of the environment and the health and safety of the public. The interrelationships with federal, state, tribal, and local organizations that should be prearranged and documented in formal plans, agreements, understandings, and/or other pre-arrangements for mutual assistance that detail the emergency measures to be provided by non-DOE entities. [DOE G 151.1-1, Vol. 1]

**Offsite Transportation Event.** Involves movement of materials that are considered to be in commerce, thus requiring compliance with Department of Transportation Hazardous Materials Regulations. [DOE O 232.1A and DOE M 232.1-1A]

**Oil.** Any kind of oil including petroleum, according to the Clean Water Act (33 U.S.C. 1321). [DOE O 151.1]

**Onsite.** The area within the boundaries of the site. [DOE G 151.1-1]

**Onsite Transportation Event.** Movement of materials not in commerce and subject to DOE onsite procedures and safety requirements. [DOE O 232.1A and DOE M 232.1-1A]

**Operational Design Basis Accident.** Any design basis accident caused by an internal event. Direct causes are usually poor design or procedures, operator errors, equipment failures, or inadequate technical development (unknowns) that lead to the accident. The major accident categories are explosion, fire, nuclear criticality, leaks to the atmosphere, and leaks to the aquatic environment. [Draft DOE Glossary]

**Operational Emergencies.** Unplanned, significant events or conditions that require time-urgent response from outside the immediate/affected site/facility or area of the incident. Incidents that can be controlled by employees or maintenance personnel in the immediate/affected facility or area are not Operational Emergencies. Incidents that do not pose a significant hazard to safety, health, and/or the environment and that do not require a time-urgent response are not Operational Emergencies. [DOE O 151.1]

**Operational Emergency Base Program.** Program established to implement the requirements of applicable federal, state, and local laws/regulations/ordinances for fundamental worker safety programs, and expand upon this Operational Emergency Base Program, if warranted, to implement additional emergency management activities at sites/facilities with significant quantities of hazardous materials (radiological and non-radiological). [DOE O 151.1]

**Operational Emergency Hazardous Materials Program.** The program developed at each DOE site/facility with significant quantities of hazardous materials (radiological and non-radiological) encompassing a quantitative hazards assessment and more detailed emergency planning requirements than the Operational Emergency Base Program. [DOE O 151.1, page 4, sect. (13)]

**Operational Facilities.** All of the facilities required to support response and recovery operations, such as the DFO, points of arrival, points of departure, mobilization areas and staging areas. [FEMA Website, Appendix B]



## Emergency Management Terms: Glossary

**Operational Procedural Violations.** Violations of documented procedures including maintenance and administrative procedures, which have the potential to impact the safety, security, environmental or health performance or operation of a facility. [DOE O 232.2]

**Oral Examination Board.** A group of individuals selected to administer an oral proficiency examination to RCTs and RCT supervisors for the purpose of evaluating their proficiency in routine and emergency conditions. [DOE G 441.12-1]

**Organization.** The site, plant, facility, function, or location for which the lessons learned program is implemented. [DOE-STD-7501-95]

**Performance-Based Training.** A systematic approach to training that is based on tasks and the related knowledge and skills required for job performance. This term is synonymous with Instructional System Design, Systematic Approach to Training, Criterion Referenced Instruction, Training System Design, and Competency-Based Training. [Draft DOE Glossary ]

**Performance Degradation.** Failure or degradation of a facility, process, system or component that reduces the reliability of critical components of the facility whose loss or degradation prevents the system from performing its intended function. Performance degradation does not include: (1) A burned out power indicator light on a piece of radiation monitoring equipment which does not prevent the equipment from detecting elevated radiation levels and alarming as designed; (2) A piece of equipment that is determined to be out of calibration on the conservative side (such as a low level alarm that alarms at a higher value than it should); or (3) the temporary loss of a component where identical redundant components are maintained in operation and the minimum authorization bases is not compromised. [DOE O 232.1A and DOE M 232.1-1A]

**Permissible Exposure Limit.** Exposure level limits for the workplace established by the OSHA Act of 1972. A common practice is to use the more stringent standard between Threshold Limit Values and Permissible Exposure Limits. [EMI SIG Glossary Task Group]

**Placard.** A standard device or sign attached to the outside of a vehicle to identify the hazards associated with the cargo. [FEMA Radiological Emergency Management Glossary]

**Plume.** An airborne cloud of radioactive gases or particles released from a nuclear power plant. [FEMA Radiological Emergency Management Glossary]

**Practical Factor.** The portion of a training or qualification program utilizing on-the-job or practical knowledge skills. Practical factors are the required attributes of this hands-on type of training. [DOE G 441.12-1]

**Pre-disaster Response.** Based on the potential or known threat of a natural disaster, i.e. hurricane, typhoon, volcanic eruption, or other event, preparatory actions taken by federal, state, and local governments to protect life and property and to minimize the effects of the event on response personnel and equipment. These actions facilitate the deployment of resources necessary for immediate response and initial recovery operations, as required. [FEMA Website, Appendix B]

**Preparedness Phase.** The phase of an emergency management program characterized by activities focused on the acquisition and maintenance of resources, along with training, drills, and exercises. [DOE O 151.1]

**Preventive Actions.** Actions taken to prevent a negative situation from occurring. [DOE-STD-7501-95, Development of DOE Lessons Learned Programs Actions]

**Primary Barrier.** Generally the barrier closest to the material. In the case of gaseous or liquid materials, the tank, cylinder, process piping, or other container is usually the primary barrier. For materials that are prevented from being released by their own structure or physical form, consider that form or structure as the barrier. [DOE G 151.1-1, Vol. 2]

**Primary Agency.** The federal department or agency assigned primary responsibility to manage and coordinate a specific ESF. Primary agencies are designated on the basis of their having the most authorities, resources, capabilities, or expertise relative to accomplishment of the specific ESF support. Primary agencies are responsible for overall planning and coordination of the delivery of ESF-related federal assistance to their state counterparts, in conjunction with their support agencies. [FEMA Website, Appendix B]

**Primary Environmental Monitors.** Monitoring equipment required to legally monitor ongoing discharges. In general, this term applies to monitors used closest to the point of discharge to determine if discharges are within specified limits. It also includes any equipment that actuates automatically in response to set level signals from such a monitor. It does not include equipment in general area, remediation, or compliance monitoring programs. [DOE O 232.1A and DOE M 232.1-1A,]

**Primary Response Capability.** Personnel and resources at the site/facility level providing support during an Operational Emergency. [DOE O 151.1]

**Priority Descriptor.** A designator provided to identify the potential level of significance or applicability of a lesson learned. [EMI SIG Glossary Task Group]

**Process.** A collection of steps or actions that yield some intermediate outcome. [DOE G 414.1-1]

**Profile.** A special type of controller instructions, can be used for actors to define roles. Profiles are normally used for media actors in either a control cell or for interviewing in person or for control cell actors representing political figures. (Profiles are generally only used with experienced controllers.) [DOE G 151.1-1, Vol. 7]

**Program.** Multiple interdependent "systems" that often require many interfaces to provide the desired product or service. [DOE G 414.1-1]

**Program Elements.** The 14 functional areas that encompass topics associated with an emergency management program: Hazards survey/assessment; emergency response organization; offsite response interfaces; emergency response organization; offsite response interface; emergency categorization/classification; communications; protective actions (including reentry); medical support; public information; emergency facilities and equipment; program administration; training and drills; consequence assessment; and termination and recovery. [DOE G 151.1-1]



## Emergency Management Terms: Glossary

**Program Evaluation.** Includes more extensive document review, extensive and in-depth interviews, systematic records examination, and identification of potential findings. The purpose of program evaluations is to verify that a comprehensive, integrated Emergency Management Program has been implemented, is being maintained, and complies with emergency management requirements. It also identifies and formally documents significant issues (findings), and documents and updates the status of the Emergency Management Program.

The program evaluation includes a critical examination of the site emergency management program in comparison with DOE policies and requirements resulting in an evaluation of all aspects of the Emergency Management Program. [DOE G 151.1-1, Vol. 6]

**Program Evaluation Criteria.** A set of example evaluation criteria that can be used to evaluate a DOE emergency management program. This list of criteria, organized by functional area and program element, can be used to develop a facility/site-specific set. [Base Program: Introduction] [DOE G 151.1-1, Vol. 1 DOE G 151.1-1, Vol. 6]

**Program Manager.** [Draft DOE Glossary]

- a. (Chief Financial Officer) An individual in an organization or activity responsible for the management of a specific function or functions and responsible for budget formulation and execution of the approved budget. The individual is the recipient of an approved funding program from the Office of Chief Financial Officer identifying his or her program dollars available to accomplish the assigned function.
- b. (Environment, Safety and Health) The Headquarters individual, or designee, designated by and under the direction of a Secretarial Officer, who is directly involved in the operation of facilities under cognizance, and holds signature authority to provide technical direction through Heads of Field Elements/Operations Office Organizations to contractors for these facilities.

**Program Office.** The Defense Programs Office with approval authority for specific nuclear weapon information. [Draft DOE O 471.XX]

**Program Significant Cost.** Cost that meets the criteria of Group 7.A. Cost Based Occurrences. [DOE O 232.1A and DOE M 232.1-1A]

**Program Significant Delay.** Delay that meets the criteria of Group 8, Facility Status. [DOE O 232.1A and DOE M 232.1-1A]

**Protective Action.** Physical measures, such as evacuation or sheltering, taken to prevent potential health hazards resulting from a release of hazardous materials to the environment from adversely affecting employees or the offsite population. [DOE G 151.1-1]

**Protective Action Criteria.** The predetermined concentrations, doses, or exposures at which protective actions will be initiated. Protective Action Guides and ERPGs are sometimes referred to generically and collectively as protective action criteria. [DOE G 151.1-1, Vol. 4]

**Protective Action Guide (PAG).** The projected dose to reference man, or other defined individual, from an accidental release of radioactive material at which a specific protective action to reduce or avoid that dose is warranted. [DOE G 151.1-1]

**Protocols.** Ground rules or rules of conduct. [DOE G 151.1-1, Vol. 7]

**Qualification.** The combination of an individual's physical attributes and technical, academic, and practical knowledge and skills developed through training, education, and on-the-job performance. [DOE G 441.12-1]

**Qualification Standard.** The explicit performance requirements for minimum proficiency in technical, academic, and site-specific knowledge and practical skills used in determining satisfactory completion of training programs. [DOE G 441.12-1]

**Rad.** An acronym for Radiation Absorbed Dose; basic unit of ionizing radiation dose. [FEMA Radiological Emergency Management Glossary]

**Radiation.** The propagation of energy through space or through matter in the form of waves (e.g., electromagnetic waves) or particles (e.g., alpha, beta, or neutron radiation). [FEMA Radiological Emergency Management Glossary]

**Radiation Absorbed Dose.** The basic unit of dose of ionizing radiation. A dose of one rad means the absorption of 100 ergs of radiation energy per gram of absorbing material. [FEMA Radiological Emergency Management Glossary]

**Radiation Sickness.** The complex of symptoms resulting from excessive exposure of most of the body to ionizing radiation. The earliest visible symptoms are nausea, fatigue, vomiting, and diarrhea, which may be followed by loss of hair (epilation), hemorrhage, inflammation of the mouth and throat, and general loss of energy. In severe cases, where the radiation exposure has been relatively large, death may occur within two to four weeks. Those who survive 6 weeks after the receipt of a single large dose of radiation will generally recover. [FEMA Radiological Emergency Management Glossary]

**Radiation Survey Instrument.** A portable battery-powered device used to detect and measure the dose rate at the spot where the instrument is held. [FEMA Radiological Emergency Management Glossary]

**Radioactive Decay.** The decrease in the amount of any radioactive material with the passage of time due to the spontaneous emission of alpha, beta, or gamma radiation from the nucleus. [FEMA Radiological Emergency Management Glossary]

**Radioactive Fallout.** Radioactive debris (including fission products) from a nuclear detonation, which is airborne or has been deposited on the earth. [FEMA Radiological Emergency Management Glossary]

**Radioactive Material.** Any material that spontaneously emits particulate or electromagnetic ionizing radiation. [FEMA Radiological Emergency Management Glossary]

**Radioactivity.** Spontaneous emission of alpha or beta particles or gamma radiation by unstable atoms. [FEMA Radiological Emergency Management Glossary]

**Radiological Assistance Program.** A DOE program designed to make DOE resources available to other DOE facilities, state, tribal, local, private business, and individuals for the explicit purpose of assisting during radiological incidents. A DOE program that provides for radiological assistance to federal, state, tribal and major Nuclear Regulatory Commission licensees in the event of an incident involving radioactive materials. [Draft DOE Glossary]

**Radiological Assistance Program Team.** Experienced DOE and/or DOE contractor personnel who are adequately trained and equipped to conduct offsite radiological emergency monitoring. Radiological Assistance Teams are at all Operations Offices, all National Laboratories, and most Area Offices and associated contractors. [Draft DOE Glossary]

**Radiological Buffer Area (RBA).** An intermediate area established to prevent the spread of radioactive contamination and to protect personnel from radiation exposure. The area surrounds or is contiguous with radiological areas. [DOE G 441.12-1]

**Radiological Facilities.** Those facilities that do not meet or exceed the hazard category 3 threshold quantity values published in DOE-STD-1027-92 but still contain some quantity of radioactive material (above those discussed in Appendix B to 40 CFR 302). [DOE-EM-STD-5502-94]

**Radionuclide.** An unstable (radioactive) nuclide. [FEMA Radiological Emergency Management Glossary]

**Reactor.** Unless it is modified by words such as containment, vessel, or core, it means the entire reactor facility, including the building/structure, equipment, and associated areas devoted to the operation and maintenance of one or more reactor cores. Any apparatus that is designed or used to sustain nuclear chain reactions in a controlled manner, including critical and pulsed assemblies and research, test, and power reactors, is defined as a reactor. All assemblies designed to perform subcritical experiments which could potentially reach criticality are also to be considered reactors. Critical assemblies are special nuclear devices designed and used to sustain nuclear reactions. Critical assemblies may be subject to frequent core and lattice configuration change and may be used frequently as mockups of reactor configurations. Therefore, requirements for modification do not apply unless the overall assembly room is modified, a new assembly room is proposed, or a new configuration is not covered in previous safety evaluations (i.e., Safety Analysis Reports, Safety Analysis Report Addenda, or Technical Safety Requirements). [DOE O 232.1A AND DOE M 232.1-1A ]

**Readiness Assurance.** The actions taken to provide assurance that Headquarters, Field Elements, and facility contractors implement appropriate aspects of DOE emergency management program policies and requirements. [DOE 5530.1A]

**Receptor.** A point or location at which consequence estimates are performed for the purpose of determining event severity by estimating impacts on safety or human health. For facilities with hazardous materials programs, human health effects are the primary concern. [DOE G 151.1-1, Vol. 4]

**Receptor Information.** The specific locations and distances at which consequence estimates are needed. [DOE G 151.1-1, Vol. 4]

**Recovery.** 1. Those actions taken after a facility has been brought to a stable or shutdown condition to return the facility to normal operation. The recovery period will begin when the emergency response to an Operational Emergency is declared terminated. The recovery phase continues until the facility and any affected areas meet predetermined criteria for the resumption of normal operation or use. The types of activities that could be conducted during the recovery phase include (but are not limited to); damage assessment, environmental consequence assessment, long-term protective action determinations, facility and/or environmental restoration, and dissemination of information. Recovery shall include notifications associated with termination of an emergency and establishment of criteria for resumption of normal operations. [DOE G 151.1-1, Vol. 4] 2. Activities traditionally associated with providing federal supplemental disaster recovery assistance under a Presidential major disaster declaration. These activities usually begin within days after the event and continue after the response activities cease. Recovery includes individual and public assistance programs that provide temporary housing assistance, grants and loans to eligible individuals and government entities to recovery from the effects of a disaster. [FEMA Website, Appendix B]

**Recovery Procedures.** Procedures that 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. [DOE O 151.1]

**Recovery organization.** Organization responsible for coordinating all recovery activities. Responsibilities include, but are not limited to, prioritization of activities; protection of worker and general public health and safety; dissemination of information; coordination of site and offsite activities; collection of data and assessment of long-term effects associated with the release of hazardous materials; formulation and implementation of long-term protective actions for the affected areas; and providing assistance as requested to state and local agencies in formulation of long-term protective actions for affected offsite areas. [DOE G 151.1-1, Vol. 4,]

**Reentry.** A planned activity to accomplish a specific objective(s) set by the Emergency Response Organization (ERO), conducted prior to the termination of emergency response, which involves reentering a facility or affected area that has been evacuated or closed to personnel access during the course of the emergency. Reentry activities are time-urgent actions performed during emergency response such as search and rescue, mitigation, damage control, and accident assessment. [DOE G 151.1-1, Vol. 4]

**Reentry Planning.** A formal plan for reentering a facility/site. The plan shall include contingency planning to ensure the safety of reentry personnel, such as planning for the rescue of reentry teams. All individuals involved in reentry shall receive a hazards/safety briefing prior to emergency response activities consistent with federal, state, and local laws and regulations. [DOE O 151.1]

**Refresher Training.** Training provided annually to certified operators and supervisors and those workers who are likely to witness a hazardous material release and who are required to notify proper authorities of the release. [DOE O 151.1]

**Regional Operations Center (ROC).** The temporary operations facility for the coordination of federal response and recovery activities, located at the FEMA Regional Office (or at the federal Regional Center) and led by the FEMA Regional Director or Deputy Director until the DFO becomes operational. Coordination of operations shifts to the state EOC upon arrival of the ERT-A at that location. From that time forward, the ROC performs a support role for federal staff at the disaster scene. [FEMA Website, Appendix B]

**Regional Teams.** Crisis management teams that support the national continuity of government teams and Regional Emergency Management Teams. The crisis management teams, which are located at each of the Operations Offices and Power Marketing Administrations, are responsible for maintaining essential operations at their sites and for shutting down all other operations. [Draft DOE Glossary]

**Release.** 1. Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or otherwise disposing of substances into the environment. This includes abandoning/discarding any type of receptacle containing substances in an unenclosed containment structure but does not include permitted containment structures. [DOE O 232.1A and DOE M 232.1-1A] 2. For operational emergencies, the primary concern is airborne release, as this pathway typically represents the most time-urgent situation and requires a rapid, coordinated emergency response on the part of the facility, collocated facilities, and surrounding jurisdictions to protect workers, the public, and the environment. [DOE G 151.1-1, Vol. 2]

**Release Designation.** A shorthand notation for a set of source term specifications that might be used to calculate consequences at various receptors. [DOE G 151.1-1, Vol. 2]

**Reportable Occurrence.** Events or conditions to be reported in accordance with the criteria defined in DOE 232.1. Emergencies, Unusual Occurrences, and Off-Normal Occurrences are Reportable Occurrences. [DOE G 151.1-1]

**Reportable Quantity.** For any Comprehensive Environmental Response, Compensation and Liability Act hazardous substance, including radionuclides and Superfund Amendments and Reauthorization Act Title 3 extremely hazardous substances, the quantities established in 40 CFR Part 302 and Part 355 respectively, releases of which require notification unless federally permitted. [DOE O 232.1A AND DOE M 232.1-1A]

**Requalification.** The process of reviewing, updating, and improving the level of knowledge for the renewal of a position qualification. It should highlight and review the initial qualification program and include subject matter not reinforced by frequent use; changes in facility conditions, procedures, or operating experience; and lessons-learned from accidents or poor practices pertaining to safe radiological controls. [DOE G 441.12-1]

**Respirable Fraction (RF).** The fraction of airborne radionuclides as particles that can be transported through air and inhaled into the human respiratory system, as defined in DOE-HDBK-3010-94. The RF is commonly assumed to include particles "10  $\mu\text{m}$  Aerodynamic Equivalent Diameter (AED) and less." The RF represents the fraction of the airborne material that contributes to the effect or consequence of concern. [DOE G 151.1-1, Vol. 2]



**Responders.** Individuals often referred to as “players,” who typically comprise the majority of people involved in the exercise. It is their responsibility to take whatever actions are necessary to mitigate the simulated emergency and thus demonstrate the ability to ensure the safety of facility personnel, the public, and the environment in accordance with established emergency plans. [DOE G 151.1-1, Vol. 7]

**Responder Briefing.** A briefing held prior to an exercise that includes rules of conduct; scope of the exercise; safety and security precautions; approved simulations; methods for identifying various exercise participants; and any special administrative, logistical, or communications arrangements in effect during the exercise. [DOE G 151.1-1, Vol. 7]

**Responder "Hotwash" Critique.** These critiques occur immediately after the exercise and are facilitated by the controller and evaluator team at each location. The purpose of these critiques is to provide a forum for constructive feedback on the exercise by the responders. [DOE G 151.1-1, Vol. 7]

**Response.** Activities to address the immediate and short-term effects of an emergency or disaster. Response includes immediate actions to save lives, protect property, and meet basic human needs. Based on the requirements of the situation, response assistance will be provided to an affected state under the Federal Response Plan using a partial activation of selected ESFs or the full activation of all ESFs to meet the needs of the situation. [FEMA Website, Appendix B]

**Response Termination.** In general, response activities are terminated when the situation has been stabilized. At this point, 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. In coordination with response organizations, the emergency is then declared terminated and activities focus on recovery. [DOE O 151.1]

**Restricted Data (RD).** All data concerning: (1) design, manufacture, or utilization of atomic weapons, (2) production of special nuclear material, or (3) use of special nuclear material in the production of energy. Restricted Data does not include data declassified or removed from the Restricted Data category pursuant to Section 142(d) of the Atomic Energy Act of 1954, as amended. [Draft DOE O 471.XX]

**Resumption of Normal Operations.** Affected facilities and areas should be returned to normal operations or use only when all criteria established by the recovery organization have been met and all approvals granted by cognizant organizations and agencies. [DOE G 151.1-1, Vol. 4]

**Retraining.** A process of reviewing, developing, and improving the knowledge base for required training. Retraining does not encompass a formal position qualification, but has similar elements and methods. [DOE G 441.12-1]

**Reviewing Official.** An individual who may make a determination that a document or material contains, does not contain, or no longer contains, Unclassified Controlled Nuclear Information. [DOE-STD-7501-95]

**Risk.** a. The probability of an undesired result or event such as: theft, loss, damage, or injury will occur. Exposure to the change of loss, damage, or injury. b. The combination of the probability of an incident releasing radioactive and/or hazardous materials and the consequences of the release on the public and the environment which, taken over all events relating to system operation, provides a meaningful picture of the adverse impact of the operation.

(Environment, Safety and Health) (Internal Controls) An existing characteristic that carries a probability of waste, loss, mismanagement, unauthorized use, or misappropriation due to the nature of an activity itself (e.g., payment of entitlements, handling sensitive or valuable material, and sales to the public). Major risks are identified in the vulnerability assessment process. Detailed risks are identified in the abbreviated management/ internal control review and the management/internal control review processes. [Draft DOE Glossary]

**Risk Assessment.** An investigation of the potential risk to human health or the environment posed by a specific action or substance. [Union Pacific Railroad Environmental Terms Glossary]

**Risk/Exposure.** The potential threat to human health or the environment that results from the release or handling of wastes or sensitive materials. [Union Pacific Railroad Environmental Terms Glossary]

**Roentgen (R).** A unit of exposure to ionizing gamma radiation in air. [FEMA Radiological Emergency Management Glossary]

**Run-card System.** A system for providing information on chemical and radiological materials located in the buildings for HAZMAT response. [DOE G 151.1-1, Vol. 6]

**Safeguards.** An integrated system of physical protection, material accounting, and material control measures designed to deter, prevent, detect, and respond to unauthorized possession, use, or sabotage of nuclear materials. [Draft DOE Glossary]

**Safety Analysis.** A documented process: (1) to provide systematic identification of hazards within a given DOE operation; (2) to describe and analyze the adequacy of the measures taken to eliminate, control, or mitigate identified hazards; and (3) to analyze and evaluate potential accidents and their associated risks. [DOE G 151.1-1]

**Safety Analysis Report (SAR).** That report which documents the adequacy of safety analysis for a nuclear facility to ensure that the facility can be constructed, operated, maintained, shut down, and decommissioned safely and in compliance with applicable laws and regulations. (10 CFR 830.3) [DOE-EM-STD-5502-94]

**Safety Basis.** The combination of information relating to the control of hazards at a nuclear facility (including design, engineering analyses, and administrative controls) upon which DOE depends for its conclusion that activities at the facility can be conducted safely. (10 CFR 830.3) [DOE-EM-STD-5502-94]

**Safety Class Structures, Systems, or Components (Safety Class SSCs).** Nuclear facility structures, systems, or components including primary environmental monitors and portions of process systems, whose failure could adversely affect the environment or safety and health of the public identified by safety analyses. [DOE 5480.30] [DOE O 232.1A AND DOE M 232.1-1A]

**Safety Evaluation.** An evaluation that documents the scope of the evaluation and the logic for determining whether or not an Unreviewed Safety Question exists. (DOE 5480.21)

**Safety Significant Structures, Systems, or Components (Safety Significant SSCs).** [DOE O 232.1A AND DOE M 232.1-1A]

- a. Nuclear facility structures, systems, or components not designated as Safety Class SSCs but whose preventative or mitigative function is a major contributor to defense in depth (i.e., prevention of uncontrolled material release) and/or worker safety as determined from hazard analysis. [DOE-STD-3009-94]
- b. Non-nuclear facility structures, systems, or components whose preventative or mitigative function is a major contributor to defense in depth (i.e., prevention of uncontrolled material release) and/or worker safety as determined from hazard analysis, if a hazard analysis was performed.

NOTE: Safety Significant SSC distinguishes a specific category of SSCs other than Safety Class SSCs. It should not be confused with the generic modifier "safety significant" used in DOE Orders (e.g., DOE 5480.23).

**Scenario Narrative.** The scenario narrative is a "storybook" summary of the background, initial conditions, initiating events, and expected responder actions. It contains descriptions of the simulated emergency situation, including the overall sequence of events, details, supporting data, and timing of activities. [DOE G 151.1-1, Vol. 7]

**Secretarial Officer.** Head of a Departmental Element who has responsibility for a specific program or facility (ies). These include the Assistant Secretaries for Defense Programs, Energy Efficiency and Renewable Energy, Environmental Management, and Fossil Energy; and the Directors of the Offices of Civilian Radioactive Waste Management, Energy Research, and Nuclear Energy; and a Cognizant Secretarial Officer is a DOE official at the Assistant Secretary level who is responsible for the assignment of work, the institutional overview of any type of facility, or both, and the management oversight of a laboratory. [Draft DOE Glossary]

**Secondary Containment.** Structures usually dikes, or berms, surrounding tanks or other storage containers and designed to catch spilled material from the storage containers. [Union Pacific Railroad Environmental Terms Glossary]

**Secure Communications Center.** An organization charged with the responsibility for receipt, transmission, and delivery of both classified and unclassified messages. It normally includes a distribution center, message center, cryptocenter, transmitting facilities, and receiving facilities, all of which are located in the security area. [Draft DOE Glossary]

**Segment.** A demarcation used in hazards assessment where the system, section, building, etc., is not affected by the failure of other systems, sections, buildings, etc. (e.g., hazardous material in one segment cannot interact with hazardous material in another). [DOE G 151.1-1]

**Senior Management Critique.** This management level critique covers the overall exercise performance, significant observations, findings, and preliminary corrective and improvement actions. [DOE G. 151.1-1, Vol. 6]

**Service.** The performance of work, such as design, construction, fabrication, inspection, nondestructive examination/testing, environmental qualification, equipment qualification, repair, installation, or the like. [DOE O 232.1A and DOE M 232.1-1A]

**Shelter-In-Place.** Protective action that calls for personnel to move into or remain indoors; close doors and windows; turn off air conditioners, heaters, and air-handling units that draw in outside air; refrain from eating, drinking, smoking, or chewing gum; and remain indoors until notified that it is safe to leave. Personnel in vehicles should roll up windows and close vents that draw in outside air (including heater and air-conditioning vents if applicable), and proceed to a safe area. [EMI SIG Glossary Task Group]

**Shielding.** Any material between a radiation source and potentially exposed people. [DOE G 151.1-1, Vol. 4]

**Significant Modification.** Any change to the facility or its operations that involves an unreviewed safety question. [DOE G 151.1-1]

**Significant Performance Degradation.** Failure or degradation that compromises the facility minimum authorization bases for the operational condition at the time of the occurrence or allows an unmonitored release that is not immediately mitigated. Entering an approved Limiting Condition of Operation (LCO) Action Statement does not compromise the minimum authorization basis. A violation of the LCO Action Statement does constitute a significant performance degradation. [DOE O 232.1A and DOE M 232.1-1A, Occurrence Reporting and Processing of Operations Information]

**Sievert (Sv).** The radiation dose unit of the international system of units. One sievert equals 100 rem. [FEMA Radiological Emergency Management Glossary]

**Site.** 1. A geographic entity comprising leased or owned land, buildings, and other structures required to perform program activities. [Draft DOE Glossary] 2. The area over which DOE has responsibility for issuing protective actions. [DOE G 151.1-1]



## Emergency Management Terms: Glossary

**Site Area Emergency.** A Site Area Emergency shall be declared when events are predicted, in progress, or have occurred that result in one or more of the following situations. [DOE O 151.1]

- (1) An actual or potential major failure of functions necessary for the protection of workers or the public. 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 Guide or Emergency Response Planning Guideline beyond the facility boundary or exclusion zone boundary. The Protective Action Guide or Emergency Response Planning Guideline is not expected to be exceeded at or beyond the site boundary.
- (2) 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) Actual or potential major degradation in the level of safety or security of a facility or process that could, with further degradation, produce a General Emergency.

**Site Boundary.** The demarcation line between DOE-owned/controlled property and property under the control of the private or other public owners. [DOE G 151.1-1]

**Site Description.** A description of the climate, geography, hydrology, seismology and land use on and near the site. [DOE G 151.1-1, Vol. 2]

**Site Exercise.** An emergency response exercise be designed to test and demonstrate the site's integrated emergency response capability. [DOE O 151.1]

**Smoke.** An air suspension of particles, often originating from combustion or sublimation. [Union Pacific Railroad Environmental Terms Glossary]

**Source Term.** A "source term" represents the amount of material released to the environment or the rate at which it is released. [DOE G 151.1-1, Vol. 4]

**Specific Activity.** The amount of radioactivity of a material per unit mass. [FEMA Radiological Emergency Management Glossary]

**Special Nuclear Material (SNM).** Plutonium, uranium-233, uranium enriched in isotope 233 or 235; any material artificially enriched by any of these elements; or any other material that the NRC, pursuant to the provisions of Section 51 of the Atomic Energy Act, determines to be special nuclear material, not including source material. [DOE G 151.1-1]

**Stability Class.** Meteorologists distinguish three states of the atmospheric surface layer: unstable, neutral, and stable. These categories refer to how a parcel of air would react when displaced adiabatically in the vertical direction. Pasquill stability types:

A: Extremely unstable	B: Moderately unstable	C: Slightly unstable
D: Neutral	E: Slightly stable	F: Moderately stable

**Standard.** A generic, all-encompassing term used to describe documents that provide a specified set of mandatory or discretionary rules, requirements or conditions concerned with performance, design, operation, or measurements of quality to accomplish a specific task. Standards may include federal laws, regulations, state laws, federal agency directives, national and international technical standards, codes of conduct, or even organizational "internal use only" documents. A standard may also include a specified set of discretionary rules or conditions concerned with the classification of components; delineation of procedures; definition of terms; specifications of materials, performance, design, or operations; or measurements of quality in describing materials, products, systems, services or practices. [Draft DOE Glossary]

**Standard (Standing) Operating Procedure.** A procedure prepared for operation of a facility or performance of a task on a routine basis. [Draft DOE Glossary]

**State.** Any state of the United States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, or the Republic of the Marshall Islands. [FEMA Website, Appendix B]

**State Coordinating Officer (SCO).** The representative of the governor who coordinates state, commonwealth, or territorial response and recovery activities with those of the federal Government. [FEMA Website, Appendix B]

**State Emergency Response Commission (SERC).** Commissions designated by the Governor of each state, for coordinating local planning efforts and insuring that facilities and the local community comply with Title III, Emergency Planning and Community Right-to-Know Act (EPCRA) requirements. SERCs have broad-based representation from state agencies, the public and private sector and they designate emergency planning districts and appoint Local Emergency Planning Committees (LEPCs). [EPCRA Sections 301-302]

**Subject Matter Expert (SME).** An individual qualified, and experienced in performing a particular task. A Subject Matter Expert may also be an individual who, by education, training, and/or experience is a recognized expert on a particular subject, topic, or system. [DOE-STD-7501-95]

**Substantial Safety Hazard.** A loss of safety function to the extent that there is a major reduction in the degree of protection provided to public or worker health and safety. [DOE O 232.1A and DOE M 232.1-1A]

**Supplier.** An organization furnishing items or services. An all-inclusive term used in place of any of the following: vendor, seller, contractor, subcontractor, fabricator, distributor, consultant, or sub-tier suppliers. [DOE O 232.1A and DOE M 232.1-1A]

**Support Agency.** A federal department or agency designated to assist a specific primary agency with available resources, capabilities, or expertise in support of ESF response operations, under the coordination of the primary agency. [FEMA Website, Appendix B]

**Synergism.** Cooperative action of substances whose total effect is greater than the sum of their separate effects. [Union Pacific Railroad Environmental Terms Glossary]

**System.** Two or more processes which may operate independently or are interdependent and may yield a complete product or service. [DOE G 414.1-1]

**Technical Operations Cadre.** The group of individuals at DOE Headquarters that gathers information during an emergency, formulates courses of action for the entire department, and presents recommendations to senior DOE management and the Executive Team, for approval. [DOE O 151.1]

**Technological Hazard.** A range of hazards emanating from the manufacture, transportation, and use of such substances as radioactive materials, chemicals, explosives, flammables, agricultural pesticides, herbicides and disease agents; oil spills on land, coastal waters or inland water systems; and debris from space. [FEMA Website, Appendix B]

**Telecommunications.** Any transmission, emission, or reception of signs, signals, writing, images, and sounds or intelligence of any nature by wire, radio, optical, or other electromagnetic systems. [Draft DOE Glossary]

**Temporary Emergency Exposure Level (TEEL).** Chemical exposure guidelines to use for emergency planning (if no ERPG is available).

**Termination.** The conclusion of an Operational Emergency. It includes a determination of when it is appropriate to cease emergency response activities and the associated notifications. The termination process begins when personnel in charge of the response effort determine that conditions are sufficiently stabilized to begin comparing them to pre-established decisional criteria. The termination decision and subsequent notification that an event no longer constitutes an Operational Emergency marks the beginning of recovery. [DOE G 151.1-1, Vol. 4]

**Terrorism.** The unlawful, premeditated use of violence, or threat of violence, committed against persons or property to intimidate, coerce, or otherwise influence a government, the civilian population, or any segment thereof, in the furtherance of political or social objectives.

**Terrorist Attack.** Any armed assault, or act of unlawful, premeditated violence, committed against persons or property to intimidate, coerce, or otherwise influence a government, the civilian population, or an segment thereof, in furtherance of political or social objectives, takes place at a DOE or contractor facility. [DOE G 151.1-1, Vol. 3]

**Thermal Radiation.** Electromagnetic radiation emitted from an explosion in the form of light and heat. [FEMA Radiological Emergency Management Glossary]

**Threshold for Early Lethality (TEL).** The threshold that applies to the general population and is intended to approximate the level of dose or exposure at which the sensitive groups within any large population would begin to show an increase in mortality. The definitions below are intended only for use in the facility Hazards Assessment process. For purposes of conducting facility Hazards Assessments, the TEL should be interpreted as follows:

- For radiological releases: *A projected dose (TEDE) of about 100 rem to reference man, where the projected TEDE is the sum of the EDE from exposure to external sources and the CEDE from inhalation during the early phase.*  
The use of 100 rem TEDE as an approximation of the lethality threshold is quite conservative. Radiation effects studies have estimated a 5 percent risk of early fatality following an acute dose of 140 rem, with a smaller but indeterminate risk expected for doses below that level.
- Little if any risk of early fatality would be associated with 100 rem TEDE if the dose were received over a period of time from radioactive material taken into the body.
- For non-radiological releases: *A projected 15-minute average concentration of the substance in air that equals or exceeds the ERPG-3 or alternative value for that substance.* [DOE G 151.1-1, Vol. 2]

**Threshold Limit Value.** American Conference of Governmental Industrial Hygienists (ACGIH) exposure level limit considered to be acceptable in the workplace. Adopted in 1968, it is the oldest of the recommended standards. A common practice is to use the more stringent standard between Threshold Limit Values and Permissible Exposure Limits.

**Threshold Planning Quantity.** Threshold planning quantities (TPQs) provided by 40 CFR Part 355 for extremely hazardous substances (EHS). Facilities that have present an EHS in excess of the TPQ must notify the state emergency response commission and participate in the local emergency planning process.

**Threshold Quantity (TQ).** Requirements established by the Clean Air Act of 1990 for substances that, in the case of accidental release, may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment. TQ values (listed in 40 CFR 68) were established primarily for off-site emergency response considerations. The TQ is not an appropriate screening level for hazard analysis or on-site emergency response considerations. An accidental release of a quantity of an extremely hazardous substance less than the TQ value could pose an immediate credible acute health effect risk to workers in the area surrounding the release site. [EMI SIG Task Group]

**Time Weighted Average.** The most frequently used exposure guideline term; the average exposure concentration over a standard workday (8 hours). [EMI SIG Task Group]

**Timeline Coordinator.** Individual, for complex exercises, who is responsible for ensuring the exercise timeline remains on schedule—a key factor for proper attainment of exercise objectives. [DOE G 151.1-1, Vol. 7]





## Emergency Management Terms: Glossary

**Timely.** Fast enough for response activities to be effective in protecting worker and public health and safety. [DOE G 151.1-1, Vol. 3]

**Timely Initial Assessment (TIA).** A rapid assessment that yields a conservative estimate of the upper bound of the potential consequences. TIA actions are designed to require minimal time and effort and the results may have a high degree of uncertainty. [DOE G 151.1-1, Vol. 4]

**Total Effective Dose Equivalent (TEDE).** The sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures). Deep dose equivalent to the whole body may be used as effective dose equivalent for external exposures. [DOE G 151.1-1]

**Toxic Pollutants.** Any pollutant listed as toxic under Section 501(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing Section 405(d) of the CWA; toxics are injurious to human health or animals. [Union Pacific Railroad Environmental Terms Glossary]

**Toxicity.** The harmfulness of a contaminant. [Union Pacific Railroad Environmental Terms Glossary]

**Tracking and Satellite Communications System.** A 24-hour, real-time tracking and two-way communications system designed to monitor the movement of radioactive materials including spent fuel, high-level waste, transuranic waste, and other high visibility shipments, as determined by DOE. [Draft DOE Glossary]

**Training.** The process of providing for, making available to, and placing or enrolling an employee(s) in a planned, prepared, and coordinated program, course, curriculum, subject, system, or routine of instruction or education, in fiscal, administrative, management, individual development, or other fields which improve individual and organizational performance and assist in achieving the agency's mission and performance goals. [Draft DOE Glossary]

**Transitory Hazards.** Hazards, that are, stored at a particular facility/site for only a short period, such as during transit or as part of a testing program. [DOE G 151.1-1]

**Transportation Emergency Management Program (TEMP).** DOE program that establishes a capability to provide planning and training support to offsite authorities for response to events involving non-weapons related shipments. TEMP was initially called the Transportation Emergency Preparedness Program (TEPP) but was renamed to TEMP to reflect the full range of the program. [DOE O 151.1-1]

**Transportation Emergency Preparedness Program (TEPP).** See Transportation Emergency Management Program (TEMP). [EMI SIG Glossary Task Group]

**Transportation Event.** Any real-time occurrence involving any of the following transportation activities: material classification; packaging; marking; labeling; placarding; shipping paper preparation; loading/unloading; separation/segregation; blocking and bracing; routing; accident reporting; and movement of materials. Transportation events with injury(ies) may also require reporting in accordance with the criteria in the personnel safety category of reportable occurrences. [Draft DOE Glossary]

**Transportation Safeguards Division (TSD) Shipments.** See Transportation Safeguards System.

**Transportation Safeguards System.** The program, managed and operated by the Manager, Albuquerque Operations Office, under the programmatic direction of the Deputy Assistant Secretary for Military Application, that has the administrative and courier personnel, special transport and escort vehicles, and nationwide high frequency communications system required to carry out the total responsibility for the safe, secure, domestic transportation of all DOE-owned or controlled nuclear explosives, Category I or II quantities of special nuclear materials (excluding naval reactor core shipments), and other cargos deemed appropriate and agreed to by the Manager, Albuquerque Operations Office, and respective Heads of Departmental Elements. [Draft DOE Glossary]

**Uninterruptible Power Supply.** A power supply that provides automatic, instantaneous power, without delay or transients, on failure of normal power. It can consist of batteries or full-time operating generators. It can be designated as standby or emergency power depending on the application. Emergency installations must meet the requirements specified for emergency power. [Draft DOE Glossary]

**Unreviewed Safety Questions (USQ).** Whether or not a USQ issue constitutes a hazard is based on a determination made by examining the following circumstances: (1) temporary or permanent changes in the facility as described in the existing safety analysis; (2) temporary or permanent changes in the procedures as derived from safety analysis; and (3) tests or experiments not described in existing safety analysis. On identification of any of the above circumstances, an Unreviewed Safety Question exists if one or more of the following conditions result:

- (1) The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the facility safety analysis could be increased;
- (2) The possibility for an accident or malfunction of a different type than any previously been evaluated in the facility safety analysis could be created; and
- (3) Any margin of safety as defined in the bases of the Technical Safety Requirements could be reduced. (DOE 5480.21) [DOE-EM-STD-5502-94, Hazard Baseline Documentation, August 1994]

**Unusual Occurrence.** A non-emergency occurrence that exceeds Off-Normal threshold criteria, is related to safety, environment, health, security, or operations, and requires immediate notification to DOE. [DOE G 151.1-1]

**Vapor.** An air dispersion of molecules of a substance that is liquid or solid in its normal physical state, at standard temperature and pressure. [Union Pacific Railroad Environmental Terms Glossary]

**Vapor Density.** The ratio of the density of a gas to the density of air. Products with a vapor density less than 1 will tend to rise and those with a vapor density greater than 1 will tend to sink in air. [Union Pacific Railroad Environmental Terms Glossary]

**Vulnerable Zone.** The area, for non-radiological hazards, that may be subject to concentrations of an airborne, extremely hazardous substance (EHS) at levels that could cause irreversible acute health effects or death to human populations within the area following an accidental release. The distance at which a "level of concern" would be exceeded as a result of a release of the hazardous material under severe (conservative) dispersion conditions. The vulnerable zone is intended to be used by community emergency planners in evaluating the risk of, and planning for, response to hazardous material releases. [DOE G 151.1-1, Vol. 2]

**Water Hammer.** An event in a steam system that is caused when water (condensate) is not properly and completely drained from the system either on startup or by the traps during normal operation. The water and steam do not mix and pulse waves (the hammer) are created that can reach thousands of pounds of pressure with the potential for catastrophic failure and/or personnel injury.

**Weapon Complex.** The DOE activities that design, manufacture, or test nuclear weapons and/or explosive devices; retire nuclear weapon components; or administer the above programs. Included are Assistant Secretary for Defense Programs (DP-1), and his Principal Deputy Assistant Secretaries (DP-2, DP-3 and DP-4); Deputy Assistant Secretary, Research and Development (DP-10); Deputy Assistant Secretary, Military Application and Stockpile Management (DP-20); Associate Deputy Assistant Secretary for Technical and Environmental Support (DP-45); Deputy Assistant Secretary for Computing and Simulation (DP-50); and the Tritium Project Office (DP-60). Also included are the DOE Operations Offices at Albuquerque (AL), Oakland (OK), and Nevada (NV); the weapons program facilities at Savannah River (SR) and the Y-12 facility at Oak Ridge (OR); the nuclear weapon laboratories at Livermore, Los Alamos and Sandia (Albuquerque and Livermore); the production facilities at Amarillo and Kansas City; and their contractors, including subcontractors and suppliers, that are concerned with nuclear weapons. [Draft DOE O 471.XX]

**Weapon of Mass Destruction.** (A) Any destructive device as defined in 18 USC, section 2332a: any explosive, incendiary, or poison gas, bomb, grenade, rocket having a propellant charge of more than four ounces, missile having an explosive or incendiary charge of more than one quarter ounce, mine or device similar to the above; (B) poison gas; (C) any weapon involving a disease organism; (D) any weapon that is designed to release radiation or radioactivity at a level dangerous to human life.

**Worker.** Persons working in the immediate area of concern within the process safety management control of a given facility or activity. Normally these individuals are covered implicitly under the worker health and safety plan for a given activity or operation. The term "workers" is meant to be all-inclusive, and includes all workers such as the facility workers, co-located workers, contractors, subcontractors' employees, and visitors. [DOE-EM-STD-5502-94]

**Workplace Environmental Exposure Level.** American Industrial Hygiene Association (AIHA) exposure level limit considered to be acceptable in the workplace.

## Emergency Management Terms: Acronyms

AAR/BOE	Association of American Railroads/Bureau of Explosives
ABHP	American Board of Health Physics
ACGIH	American Conference of Governmental Industrial Hygienists
ACP	Access control point
ACP	Access control post
ACRS	Advisory Committee on Reactor Safeguards
ADC	Authorized Derivative Classifier
ADP	Automatic data processing
AEC	Agency Emergency Coordinators
AED	Aerodynamic equivalent diameter
AEGL	Acute Exposure Guideline Level, under development by EPA and the National Academy of Science
AFMIC	Armed Forces Medical Intelligence Center
AFOS	Automated field operation and services
AHU	Air handling unit
AIC	Alternate Information Center
AIChE	American Institute of Chemical Engineers
AIF	Atomic Industrial Forum
AIHA	American Industrial Hygiene Association
AIP	Agreement in principle
AIT	Aeromedical Isolation Team
AL	Albuquerque Operations Office
ALARA	As low as reasonably achievable (concept for minimizing occupational and public exposure to radiation)
ALI	Annual limit on intake
ALS	Advanced Life Support
AMC	Air Mobility Command
AMC	United States Army Material Command
AMEDD	Army Medical Department
AMS	Aerial Measurement System
ANS	American Nuclear Society
ANSI	American National Standards Institute
ANWC	Alternate National Warning Center
AP	Associated Press
APC	Accident Prevention Council
APWA	American Public Works Association
ARAC	Atmospheric Release Advisory Capability (now National Atmospheric Release Advisory Capability –NARAC)
ARC	American Red Cross
ARCCC	Accident Response Capabilities Coordinating Committee
ARF	Airborne release fraction
ARG	Accident Response Group
ARL	Army Research Laboratory
ARM	Area Radiation Monitors
ARMS	Area Radiation Monitor System
ARR	Airborne release rate (fraction/hour)
ART	Airborne Response Team
ASCS	Agricultural Stabilization and Conservation Service

## Emergency Management Terms: Acronyms

ASD	Assistant Secretary of Defense
ASD (HA)	Assistant Secretary of Defense for Health Affairs
ASD (SO/LIC)	Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict
ASLAB	Atomic Safety and Licensing Appeal Board
ASLB	Atomic Safety and Licensing Board
ASME	American Society of Mechanical Engineers
ASPEP	American Society of Professional Emergency Planners
ASSE	American Society of Safety Engineers
AT	Anti-terrorism
ATCC	American Type Culture Collection
ATF	Alcohol, Tobacco & Firearms
ATSD (AE)	Assistant to the Secretary of Defense (Atomic Energy) (Changed to Assistant Secretary of Defense for Nuclear, Biological, and Chemical [NBC] Defense Programs)
ATSD (NBC)	Assistant to the Secretary of Defense for Nuclear, Biological, and Chemical Defense Programs (formerly Assistant to the Secretary of Defense for Atomic Energy)
ATSDR	Agency for Toxic Substances and Disease Registry [U.S. Department of Health and Human Services (HHS)]
BATF	Bureau of Alcohol, Tobacco and Firearms (of the Treasury Department)
BDBA	Beyond design basis accident
BEIR	Biological effects of ionizing radiation
BLEVE	Boiling Liquid Expanding Vapor Explosion
BLS	Basic Life Support
BMI	Battelle Memorial Institute
BNL	Brookhaven National Laboratory
BPS	Boeing Petroleum Services
Bq	Becquerel
CAA	Clean Air Act
C/B	Chemical/biological
C/B AT	Chemical/Biological Antiterrorism Team
C/B	Chemical/biological
C <sup>2</sup>	Command and control
C <sup>3</sup>	Command, control, and communications
C <sup>3</sup> CM	Command, control, and communications countermeasures
CABIN	Chemical and Biological Information Network
CAER	Community Awareness and Emergency Response (Chemical Manufacturers Association)
CAM	Chemical agent monitor
CAM	Continuous air monitor
CAP	Civil Air Patrol
CAP	Crisis Action Procedures
CAS	Central alarm stations
CAT	Crisis Action Team
CB	Citizens band
CBD	Chemical and Biological Defense
CBDCOM	U.S. Army Chemical and Biological Defense Command

## Emergency Management Terms: Acronyms

CBIIRF	Chemical and Biological Incident Response Force
CBIRG	Chemical and Biological Incident Response Group
CBR	Chemical, Biological, and Radiological
CBRDT	Chemical/Biological Rapid Development Team
CBRT	Chemical/Biological Response Team
CBW	Chemical/Biological Weapon
CC	Control cell
CCC	Crisis Coordination Center
CCC	Command, control, and communications (also known as C <sup>3</sup> )
CCST	Chemical Casualty Site Team
CCWG	Contamination Control Working Group
CD	Civil defense
CDC	Centers for Disease Control (U.S. Department of Health and Human Services)
CDE	Committed dose equivalent (rem)
CDRG	Catastrophic Disaster Response Group
CDRH	Center for Devices and Radiological Health
CDRTF	Commander, Disaster Relief Task Force
CDWS	Civil Defense Warning System
CE-1	Assistant Secretary for Conservation and Renewable Energy
CEDE	Committed effective dose equivalent (rem)
CEPP	Chemical Emergency Preparedness Program
CEPPO	Chemical Emergency Preparedness and Prevention Office
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Public Law 96-510)
CERCLIS	CERCLA Information System
CFA	Cognizant federal agency
CFAO	Cognizant federal agency official
CFR	Code of Federal Regulations
CH	Chicago Operations Office
CHEMNET	A mutual aid network of chemical shippers and contractors
CHEMTREC	Chemical Transportation Emergency Center
CHF	Central Health Facility
CHLOREP	A mutual aid group comprised of shippers and carriers of chlorine
CHRIS/HACS	Chemical Hazards Response Information System/Hazard Assessment Computer System
Ci	Curie
CIA	Central Intelligence Agency
CIC	Container Inspection Card
CIF	Commander-In-Chief (CINC) In-Extremis Force
CINC	Commander-In-Chief
CIRG	Critical Incident Response Group
CIRMS	Council on Ionizing Radiation Measurements and Standards
CIRRPC	Committee on Interagency Radiation Research and Policy Coordination
CIS	Community Information System
CJCS	Chairman of the Joint Chief of Staff
CLEAR	Combined Law Enforcement Action Radio
CM	Consequence management

## Emergency Management Terms: Acronyms

CM	Crisis manager
C°M	Consequence management
CMA	Chemical Manufacturers Association
CMPT	Consequence Management Policy Team
CMRG	Consequence Management Response Group
CMRT	Consequence Management Response Team
CMT	Crisis Management Team
CNT	Crisis Negotiations Team
COA	Course of action
COG	Continuity of government
COGEMT	Continuity of Government Emergency Management Team
COMVAN	Communications van
CONUS	Continental United States
CP	Command post
CP-1	Assistant Secretary for Congressional and Intergovernmental Affairs
CP-3	Press secretary to the Secretary of Energy
CPG 1-3	Federal Assistance Handbook: Emergency Management, Direction and Control Programs
CPG 1-8	Guide for Development of State and Local Emergency Operations Plans
CPG 1-8A	Guide for the Review of State and Local Emergency Operations Plans
CPR	Cardiopulmonary resuscitation
CPX	Command post exercise
CPZ	Contingency planning zone
CR	Control room
CRCPD	Conference of Radiation Control Program Directors, Inc.
CSO	Cognizant Secretarial Officer
CT	Counterterrorism
CTA	Central Training Academy
CTMA	Contractor Traffic Managers Association
CW	Chemical warfare/chemical weapons
CWA	Clean Water Act
CWC	Chemical weapons convention
CY	Calendar year
D	Absorbed dose
DA	Department of the Army
DAC	Derived air concentration
DAC	Disaster Application Center
DAC	Disaster Assistance Center
DAC	Dose Assessment Center
DAE	Disaster Assistance Employee
DASNR	Deputy Assistant Secretary for Naval Reactors
DAST	Disaster Area Survey Team
DATSD (AE)(CBM)	Deputy Assistant to the Secretary of Defense (Atomic Energy) (Chemical/Biological Matters)
DBA	Design basis accident
DCE	Defense Coordinating Element
DCF	Dose Conversion Factor
DCG	Derived concentration guide



## Emergency Management Terms: Acronyms

DCO	Defense Coordinating Officer
DCPA	Defense Civil Preparedness Agency
D&D	Decontamination and decommissioning
DDE	Deep dose equivalent
DEFCON	Defense readiness condition
DEM	Director of Emergency Management
DEMT	Director, Emergency Management Team
DEO	Director of Emergency Operations
DEPS	Domestic Emergency Planning System
DERF	Defense Emergency Response Fund
DES	Digital encryption standard
DEST	Domestic Emergency Support Team
DEST	Domestic Emergency Search Team
DFC	Disaster Finance Center
DFO	Disaster Field Office
DHHS	United States Department of Health and Human Services
DMAT	Disaster Medical Assistance Team
DMORT	Disaster Mortuary Team
DNA	Defense Nuclear Agency
DO	Duty Officer
DOC	United States Department of Commerce
DOCS	Deputy for Operations/Chief of Staff
DOD	United States Department of Defense
DOE	United States Department of Energy
DOE-HQ	Department of Energy Headquarters
DOI	United States Department of the Interior
DOJ/FBI	Department of Justice/Federal Bureau of Investigation
DOJ	United States Department of Justice
DOL	United States Department of Labor
DOMS	Director of Military Support
DOS	United States Department of State
DOT	United States Department of Transportation
DOT RSPA	Department of Transportation Research and Special Program Administration
DP	Defense Programs
DP-1	Assistant Secretary for Defense Programs
DP-23	DOE/HQ Office of Emergency Response
DR	Damage ratio (fraction)
DRTF	Disaster Relief Task Force
DSFO	Deputy senior Federal Emergency Management Agency (FEMA) official
DSO	Director of Site Operations [U.S. Nuclear Regulatory Commission (NRC)]
DSR	Defense Senior Representative
DT/CTPS	Domestic Terrorism/Counterterrorism Planning Section
DTIC	Defense Technical Information Center
DTRG	DOD Technical Response Group
DWPF	Defense waste processing facility
EA	Environmental assessment



## Emergency Management Terms: Acronyms

EACT	Emergency Action and Coordination Team
EAL	Emergency action level
EARM	Emergency Assessment Resource Manual
EBS	Emergency Broadcast System
EC&EG	Exercise Control and Evaluation Group
ECC	Emergency control center
ECCS	Emergency core cooling system
ECG	Exercise Control Group
ECHOS	Emergency Center Historic Operations System
ECRS	Event Classification and Reporting System
ECS	Emergency control station
ECS	Emergency control system
ECS	Emergency cooling station
ED	Exercise Director
EDC	Emergency Dispatch Center
EDE	Effective dose equivalent
EDO	Emergency duty officer
EEEE	Emergency Exercise Evaluation Criteria
EEGL	Emergency exposure guidance level
EEMS	Energy Emergency Management System
EEMT	Energy Emergency Management Team
EENET	Emergency Education Network [FEMA]
EG&G	EG&G, Inc.
EH-1	Assistant Secretary for Environment, Safety, and Health
EHS	Extremely hazardous substance
EHW	Extremely hazardous waste
EI-1	Administrator, Energy Information Administration
EIA	Energy Information Administration
EICC	Emergency Information and Coordination Center [FEMA]
EIDA	Executive Information and Display Area
EIS	Environmental impact statement
EM	Emergency management
EM	Emergency manager
EM-1	Assistant Secretary for Office of Environmental Restoration and Waste Management
EM-1	Director, Office of Environmental Restoration and Waste Management
EMAC	Emergency Management Advisory Committee
EMAC	Energy Management Advisory Committee
EMC	Emergency Management Center
EMCC	Emergency Management Coordination Committee
EMCCS	Emergency Management Coordination Committee Secretariat
EMG	Emergency Management Guide
EMI	Emergency Management Institute
EMI SIG	Emergency Management Issues Special Interest Group (TRADE)
EMS	Emergency Management System
EMSL	Environmental Measurements Support Laboratory
EMT	Emergency management team
EMT	Emergency medical technician

## Emergency Management Terms: Acronyms

ENN	Emergency Notification Network
EOC	Emergency operations center
EOCN	Emergency Operations Communications Network
EOD	Explosive ordnance disposal
EOF	Emergency operations facility
EOL	End of life
EOP	Emergency operations plan
EP	Emergency plan
EPA	United States Environmental Protection Agency
EPC	Emergency Press Center
EPCRA	Emergency Planning and Community Right-to-Know Act
EPD	Emergency Planning Districts [SARA of 1986]
EPG	Exercise Planning Group
EPI	Emergency Public Information
EPIP	Emergency Plan Implementing Procedures
EPLO	Emergency Preparedness Liaison Officer
EPP	Emergency Preparedness Procedures
EPZ	Emergency planning zone
ERAA	Emergency Readiness Assurance Appraisal
ERAP	Emergency Readiness Assurance Plan
ERC	Emergency Response Center
ERD	Emergency Response Division
ERL	Emergency response levels
ERO	Emergency Response Organization
ERPG	Emergency Response Planning Guide
ERPG	Emergency response planning guidelines
ERT	Emergency Response Team
ERT-A	Emergency Response Team (Advanced Element)
ERT-N	National Emergency Response Team
ERTF	Emergency Radiation Treatment Facility
ERTS	Emergency Radiation Treatment Staff
ESC	Emergency Support Center
ESF	Emergency support function
ESO	Emergency Support Office
EST	Emergency support team
ETS	Emergency Telecommunications Services
FAA	Federal Aviation Administration
FAST	Field Assessment Team
FAX	Facsimile
FBI	Federal Bureau of Investigation
FBICP	FBI Command Post (FBI equivalent to ROC)
FBI OSC	FBI On-scene Commander (FBI equivalent to FCO)
FCC	Federal Communications Commission
FCC	Federal Coordination Center
FCO	Federal coordinating officer
FCP	Field command post
FD	FRMAC director
FDA	U.S. Food and Drug Administration



## Emergency Management Terms: Acronyms

FE-1	Assistant Secretary for Fossil Energy
FEIS	Final environmental impact statement
FEMA	Federal Emergency Management Agency
FEMA-REP-15	Federal Emergency Management Agency Radiological Emergency Preparedness Exercise Evaluation Methodology
FESC	Federal Emergency Support Capability
FESC	Federal Emergency Support Center
FEST	Foreign Emergency Search Team
FFE	Federal field exercise
FHA	Fire Hazards Analysis
FHWA	Federal Highway Administration (U.S. Department of Transportation)
FM	Frequency modulation
FMWG	Field Monitoring Working Group
FNARS	FEMA's National Radio System
FOIA	Freedom of Information Act
FORSCOM	US Army Forces
FOTM	Field Office Traffic Managers
FPC	Federal Power Commission
FR	Federal Register
FRA	Federal Railroad Administration
FRC	Federal Response Center
FRC	Federal Radiation Council
FRC	Federal Regional Center
FRD	Formerly restricted data
FRERP	Federal Radiological Emergency Response Plan
FRMAC	Federal Radiological Monitoring and Assessment Center
FRMAP	Federal Radiological Monitoring and Assessment Plan
FRP	Federal Response Plan
FRPCC	Federal Radiological Preparedness Coordinating Committee
FSAR	Final safety analysis report
FSN	FEMA Switch Network
FTS	Federal Telecommunications System
FUDS	Formerly Utilized Defense Sites
FWPCA	Federal Water Pollution Control Act
FY	Fiscal Year
GAO	General Accounting Office
GB	A nerve agent (Sarin)
GE	General Emergency
GET	General Employee Training
GC-1	General Counsel
GIS	Geographic Information System
GMT	Greenwich Mean Time (also see Zulu)
GSA	General Services Administration
H	Dose equivalent
HAZMAT	Hazardous materials
HAZWOPER	Hazardous Waste Operations and Emergency Response
HEAR	Hospital Emergency Administration Radio
HEPA	High efficiency particulate air

## Emergency Management Terms: Acronyms

HF	High frequency
HHS	United States Department of Health and Human Services
HHSEOC	HHS Emergency Operations Center
HMEC	Hazardous Materials Emergency Coordinator
HMI	Hazardous Material Incident
HMIX	Hazardous Materials Information Exchange
HMRT	Hazardous Materials Response Team
HMRU	Hazardous Materials Response United
HMTA	Hazardous Materials Transportation Act
HMTUSA	Hazardous Materials Transportation Uniform Safety Act of 1990
HP	Health physics
HPN	Health Physics Network
HPS	Health Physics Society
HQ EOC	Headquarters Emergency Operations Center
HQ	Headquarters
HRT	Hostage Rescue Team
HUD	U.S. Department of Housing and Urban Development
HUMINT	Human intelligence
HVAC	Heating, ventilation, and air conditioning
I&W	Indications and Warning
IACP	International Association of Chiefs of Police
IAEA	International Atomic Energy Agency
IAFC	International Association of Fire Chiefs
IAFF	International Association of Fire Fighters
IC	Incident Commander
ICAM	Improved chemical agent monitor
ICC	Incident Command Center
ICC	Interstate Commerce Commission
ICG	Incident Command Group
ICP	Incident Command Post
ICPAE	Interagency Committee on Public Affairs in Emergencies
ICRP	Internal Commission on Radiological Protection
ICS	Incident Command System
ICRP	International Commission on Radiological Protection
ICS	Incident Command System
IDLH	Immediately dangerous to life and health
IDLH	Immediately dangerous to life or health
IE-1	Assistant Secretary for International Affairs and Energy Emergencies
IE-20	Deputy Assistant Secretary for Energy Emergencies
IED	Improvised explosive device
IEMS	Integrated Emergency Management System
IG	Inspector General
IG-EV	Interagency Group on Energy Vulnerability
IN-1	Director, Office of Intelligence
IND	Improvised nuclear device
INPO	Institute of Nuclear Power Operations

## Emergency Management Terms: Acronyms

INR	Bureau of Intelligence and Research
IOAC	Interorganizational Advisory Committee on Radiological Emergency Response Planning and Preparedness
IR	Infrared
IRAP	Interagency Radiological Assistance Plan (superseded by FRMAP)
IRF	Incident Response Force
IRR	Initial response resources
IRT	Initial Response Team
IRZ	Immediate Response Zone
ITSD	Information Technology Services Directorate
ITSO	Office of Information Technology Services and Operations
IWG/CT	Interagency Working Group/Office of Counterterrorism
JCC	Joint Coordinating Center
JCS	Joint Chiefs of Staff
JHEC	Joint Hazard Evaluation Center
JIC	Joint Information Center
JMEX	Joint master exercise schedule
JNACC	Joint Nuclear Accident Coordination Center
JOC	Joint Operations Center (FBI equivalent to DFO)
JPIC	Joint Public Information Center
JPM-BD	Joint Program Manager for Biological Defense
JTOT	Joint Technical Operations Team
JSOTF	Joint Special Operations Task Force
KSA	Knowledge, skill, and ability
LA	Lead agency
LANL	Los Alamos National Laboratory
LAO	Lead agency official
LC50	Median lethal concentration
LCF	Latent cancer fatalities
LCLO	Lethal concentration low
LCO	Limiting condition of operation
LD50	Median lethal dose
LDLO	Lethal dose low
LEADS	Law Enforcement Automated Data System
LEDC	Law Enforcement Dispatch Center
LEERN	Law Enforcement Emergency Radio Network
LEPC	Local Emergency Planning Committee [SARA of 1986]
LERM	Liquid effluent radiation monitor
LFA	Lead Federal Agency
LLC	Line load control
LLEA	Local law enforcement agency
LLNL	Lawrence Livermore National Laboratory
LLW	Low level waste
LOC	Level of concern
LOCA	Loss of coolant accident
LPF	Leak path factor (fraction)
LPZ	Low population zone

## Emergency Management Terms: Acronyms

LRC	Learning Resource Center [National Emergency Training Center]
LSA	Low specific activity
LWA	Limited work authorization
MAA	Mutual Assistance Agreement/Mutual Aid Agreement
MAR	Material at risk (Ci or Bq)
MARAD	Maritime Administration
MBA	Material balance accountability
MC	Mobilization Center
MC&A	Materials Control and Accountability
MD	Mitigation Directorate
MDT	Mountain Daylight Time
MEAP	Mobile Environmental Analytical Platform
MEDCOM	US Army Medical Command
MEDEVAC	Medical Evacuation Service
MERC	Mobile Emergency Response Center
MERP	Mobile Emergency Response Support
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPC	Maximum permissible concentration
MRL	Mobile Radiological Laboratory
MSDS	Material Safety Data Sheet
MSEL	Master Scenario Events List
MSEL	Master Sequence of Events List
MSLO	Military Support Liaison Office
MSSA	Master Safeguards and Security Agreement
MST	Mountain Standard Time
N	Modifying factors
NACA	National Agricultural Chemicals Association
NAE	National Academy of Engineering
NAERG	North American Emergency Response Guidebook
NARAC	National Atmospheric Release Advisory Capability (formerly Atmospheric Release Advisory Capability – ARAC)
NAS	National Academy of Sciences Committee on Toxicology
NAS	National Academy of Sciences
NAWAS	National Warning System
NBC	Nuclear, Biological, Chemical
NBCCAS	Nuclear, Biological, Chemical Casualty Assessment
NBCWRS	Nuclear, Biological, Chemical Warning and Reporting System
NCA	National Command Authority
NCCEM	National Coordinating Council on Emergency Management (now International Association of Emergency Managers – IAEU)
NCP	National Contingency Plan
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NCRIC	National Chemical Response and Information Center [CMA]
NCRP	National Council on Radiation Protection and Measurements
NCS	National Communications System
NCSL	National Conference of State Legislatures
NDA	National Defense Area

## Emergency Management Terms: Acronyms

NDL	Nuclear Data Link (to NRC EOC in Bethesda, MD, and other locations)
NDMS	National Disaster Medical System Operations Support Center
NDMS	National Disaster Medical System
NE-1	Assistant Secretary for Nuclear Energy
NECC	National Emergency Coordination Center
NELA	Nuclear explosive-like assembly
NEMA	National Emergency Management Association
NEMS	National Emergency Management System
NEMT	National Emergency Management Team
NERC	North American Electrical Reliability Council
NESR	Nuclear explosive safety rule
NEST	Nuclear Emergency Search Team
NETC	National Emergency Training Center
NFA	National Fire Academy
NFPA	National Fire Protection Association
NGA	National Governors Association
NGO	Non-governmental organization
NIC	National Instrumental Center
NIH	National Institutes of Health
NIMS	Nuclear Incident Monitoring System
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NMCA	Nuclear material control and accountability
NMCC	National Military Command Center
NMFS	National Marine Fisheries Service
NMMSS	Nuclear Materials Management and Standards System
NMRI	Naval Medical Research Institute
NN-60	Director, Office of Emergency Management
NOAA	National Oceanic and Atmospheric Administration
NOS	Nuclear and Occupational Safety Division
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
NRC	United States Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
NRT	National Response Team
NS/EP	National Security Emergency Preparedness
NS-1	Director, Office of Nuclear Safety
NSA	National Security Area
NSA	National Security Agency
NSC	National Security Council
NSC/DC	National Security Council Deputies Committee
NSC/PC	National Security Council Principals Committee
NSC/IWG	National Security Council Interagency Working Group
NSDD	National Security Decision Directive
NSEP	National Security and Emergency Preparedness
NSF	National Science Foundation
NSI	National security information
NTIS	National Technical Information Service

## Emergency Management Terms: Acronyms

NTS	Nevada Test Site
NUE	Notification of unusual event
NUMCC	Nuclear Material Control Center
NUREG	A document category for NRC
NUREG	Nuclear Regulatory Commission-produced reference document
NUWAX	Joint nuclear weapons accident exercise
NV	Nevada Operations Office
NWARP	Nuclear weapon accident response procedure
NCW	National Warning Center
NW I	Nuclear weapon information
NWS	National Weather Service
NWSI	Nuclear weapon significant incident
OASA	Office of the Assistant Secretary of the Army
OASA(RDA)	Office of the Assistant Secretary of the Army for Research, Development & Acquisition
OASD(SOLIC)	Office of the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict
OASH/OEP	Office of the Assistant Secretary of Health, Office of Emergency Preparedness
OC	Operations Center
OCC	Office of Chief Counsel
OCE	Office of Chief Engineer
OEA	Office of External Affairs
OEMT	Operational Emergency Management Team
OEO	Office of Emergency Operations
OEP	Office of Emergency Preparedness
OEP/NDMS	Office of Emergency Preparedness/National Disaster Medical System
OES	Office of Emergency Services
OHMTADS	Oil and Hazardous Materials Technical Assistance Data System
OJT	On-the-job training
OMB	Office of Management and Budget
OPA	Office of Policy and Assessments
OPM	Office of Personnel Management
OPR	Office of Primary Responsibility
OR	Occurrence report
ORNL	Oak Ridge National Laboratory
ORDO	Occurrence Reporting Duty Officer
ORPS	Occurrence Reporting and Processing System
OSC	On-scene commander
OSC	On-scene coordinator
OSC	Operations Support Center
OSCG	On-Scene Support Group
OSD	Office of Secretary of Defense
OSHA	Occupational Safety and Health Act
OSHA	Occupational Safety and Health Administration
OSP	Operational Safety Procedure
OSS	Office of Safeguards and Security (DOE)
OSTD	Offsite Technical Director



## Emergency Management Terms: Acronyms

OTC	Offensive tactical commander
OTD	On-site technical director
OTSG	Office of the Surgeon General
OUO	Official use only
P.L.	Public Law
P&E	Plant and equipment
PA	Public address
PA	Public Affairs
PA-1	Director, Office of Public Affairs
PAC	Protective action criteria
PAD	Protective Action Decision
PAG	Protective action guide or guideline
PAM	Protective Action Manual
PAO	Public Affairs Officer
PAP	Personnel Assurance Program
PAR	Protective action recommendation
PARD	Protect as restricted data
PASS	Post Accident Sampling System
PAT	Public Affairs Team
PAZ	Protective Action Zone
PBT	Performance-based Training
PD	Production Division
PDD	Presidential Decision Directive
PE-1	Director, Office of Policy, Planning, and Analysis
PEL	Permissible exposure limit
PEL-C	Permissible exposure level – ceiling
PEL-STEL	Permissible exposure limit – short term exposure limit
PER	Performance evaluation report
PHS	Public Health Service
PHS/OEP	US Public Health Service/Office of Emergency Preparedness
PIDAS	Perimeter Intrusion Display Alarm System
PIO	Public Information Office/Officer
PIRG	Public Interest Research Group
PM	Program Manager
PMA	Power Marketing Administration
PMF	Probable maximum flood
PNL	Pacific Northwest Laboratory
POA	Point of arrival
POC	Point of Contact
POD	Point of departure
PPA	Pollution Prevention Act
PPE	Personal Protective Equipment
PRA	Probabilistic Risk Assessment
PSA	Public Service Announcement
PSAR	Preliminary safety analysis report
PSO	Program Senior Official
PSO	Program Secretarial Officer
PSS	Plant Shift Superintendent

## Emergency Management Terms: Acronyms

PSTN	Pesticide Safety Team Network
PT&E	Preparedness, Training & Exercises
PT&ED	Preparedness, Training & Exercise Directorate
PWR	Pressurized water reactor
PZ	Precautionary Zone
Q	Quality factor
R&D	Research and development
R&R	Response and Recovery Directorate
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
RANS	Rapid Alert Notification System
RAP	Radiological Assistance Program
RAT	Radiological Assistance Team
RBA	Radiological buffer area
RCAD	Remote Chemical Agent Detector
RCG	Radioactivity Concentration Guide
RCO	Regional Coordinating Office
RCRA	Resource Conservation and Recovery Act (Public Law 94-580)
RD	Regional Director
RD	Restricted data
RDD	Radiological Dispersal Device
RDT&E	Research Development, Test & Evaluation
REAC/TS	Radiation Emergency Assistance Center/Training Site
RECWG	Regional Emergency Coordinators Working Group
REECo	Reynolds Electrical and Engineering Company
REMT	Regional Emergency Management Team
RER	Reentry recommendation
RF	Respirable fraction
RHA	Regional Health Administrator
RL	Richland Operations Office
RMEC	Regional Military Emergency Coordinator
RN	Registered nurse
ROC	Regional Operations Center
ROP	Response options paper
ROST	Regional Operations Support Team
RPG	Response Planning Guide
RPM	Remedial project manager
RQ	Reportable quantity
RRP	Regional Response Plan
RRT	Regional Response Team (DOE)
RSO	Radiological safety officer
RSPA	Research and Special Programs Administration [U.S. DOT]
RSS	Reactor safety study
RTAPS	Real time agent monitoring platform
RTECS	Registry of Toxic Effects of Chemical Substances
RTK	Right to know
S/CT	State (Dept.) Coordinator of Counterterrorism
S&H	Safety and Health



## Emergency Management Terms: Acronyms

SA	Special agent
SA-1	Director of Security Affairs
SAC	Special agent in charge
SACNET	Secure Automatic Communications Network
SAE	Site Area Emergency
SAO	Security Assistance Office
SAR	Safety analysis report/review
SARA	Superfund Amendments and Reauthorization Act of 1986 (PL 99-499)
SCAPA	Subcommittee on Consequence Assessment and Protective Action
SCBA	Self-contained breathing apparatus
SCI	Sensitive compartmented information
SCO	State coordinating officer
SD	Standing directives
SDATE	Special Disaster Assistance Team Employee
SECOM	Security Communications Control Center
SER	Safety evaluation report
SERC	State Emergency Response Commission [SARA of 1986 ]
SERT	Security Emergency Response Team
SFO	Senior FEMA official
SIOC	Strategic Information Operations Center (FBI equivalent to EICC)
SIR	Security incident report
SITREP	Situation Report
SME	Subject matter expert
SMS	Space monitoring system
SMS/CAM	Space monitoring system/continuous air monitor
SMSA	Standard Metropolitan Statistical Area
SNL	Sandia National Laboratories
SNM	Special nuclear material
SOP	Standard operating procedure
SP	Standard practice
SPCC	Spill Prevention, Control & Communications
SPDS	Safety Parameter Display System
SPEGL	Short-term Public Emergency Guidance Levels
SPR	Strategic Petroleum Reserve
SPRPMO	Strategic Petroleum Reserve Project Management Office
SRP	Savannah River Plant
SRT	Special Response Team
SSA	Senior scientific advisor
SSA	Supervisory special agent
SSBI	Single Scope Background Investigation
SSC	Structure, system, or component
SSRA	Senior supervisory resident agent
SSSA	Senior supervisory special agent
SST	Safe Secure Transport
ST	Source term (Ci or Bq)
STA	Site technical advisor
STCC	Standard Transportation Commodity Code
STEL	Short-term exposure limit

## Emergency Management Terms: Acronyms

SWMU	Solid Waste Management Unit
SWP	Special work procedure/permit (clothing)
t	Release duration (hours)
TAG	The (State) Adjutant General
TAP	Training Accreditation Program
TBD	To be determined
TCP	Traffic control point
TEDE	Total effective dose equivalent
TEEL	Temporary emergency exposure level
TEL	Threshold for early lethality
TELOS	Test and evaluate local operating systems
TEMP	Transportation Emergency Management Program
TEPP	Transportation Emergency Preparedness Program
TES	Training/Evaluation Standard
TEU	US Army Technical Escort Unit
TRF	Temporary Flight Restriction
TIA	Timely initial assessment
TITF	Transportation Institutional Task Force
TL	Threshold limit
TLD	Thermoluminescent dosimeter
TLV	Threshold limit value
TLV-C	Threshold limit value – ceiling
TLV-STEL	Threshold limit value - short-term exposure limit
TLV-TWA	Threshold limit value - time weighted average
TMI	Three Mile Island
TOC	Technical Operations Cadre
TOC	Tactical Operations Center
TPQ	Threshold planning quantity
TQ	Threshold quantity
TRAC	Tracking radioactive atmospheric contaminants
TRADE	Training Resources and Data Exchange
TRANSCOM	Tracking and Satellite Communications System
TRANSCOM	Transportation Tracking and Communication System
TRU	Transuranic material(s)
TS	Technical specifications (“Tech Specs”)
TS	Top Secret
TSA	Technical safety appraisal
TSC	Technical Support Center
TSCA	Toxic Substance Control Act (1976)
TSD	Transportation Safeguards Division
TSDF	Treatment, storage, or disposal facility
TSG	The Surgeon General
TSR	Technical Safety Requirements
TSS	Transportation Safeguards System
TVA	Tennessee Valley Authority
TWA	Time weighted average
U.S.C.	United States Code
UBC	Uniform building code

## Emergency Management Terms: Acronyms

UCID	University of California Informal Document
UCNI	Unclassified Controlled Nuclear Information
USC	Unified command structure
UELUFLL	Upper Explosive Limits Upper Flammable Level
UHF	Ultra high frequency
UPI	United Press International
UR&RTF	Urban Search and Rescue Task Force
US&R	Urban search and rescue
USA	US Army
USACOM	US Atlantic Command
USAMMA	US Army Medical Material Agency
USAMMDA	US Army Medical Material Development Activity
USAMRMC	US Army Medical Research and Material Command
USANCA	US Army Nuclear and Chemical Agency
USARICD	US Army Medical Research Institute for Chemical Diseases
USARIID	US Army Medical Research Institute for Infectious Diseases
USC/ICS	Unified Command Structure and Incident Command System
USC	United States Code
USCG	U.S. Coast Guard [DOT}
USD	Under Secretary of Defense
USD(P)	Under Secretary of Defense for Policy
USDA	U.S. Department of Agriculture
USFA	U.S. Fire Administration [FEMA]
USFS	U.S. Forest Service
USFORSCOM	US Army Forces Command
USGS	U.S. Geological Survey
USNRC	U.S. Nuclear Regulatory Commission
USPHS	U.S. Public Health
USPS	U.S. Postal Service
USQ	Unresolved Safety Question
VA	Department of Veterans Affairs
VAMC	Veterans Administration Medical Center
VHA	Veterans Health Administration
VHF	Very high frequency
VOLAG	Volunteer Assistance Group
VOX	Voice operated
VSAT	Very-Small-Aperture Terminal
WEEL	Workplace Environmental Exposure Level
WCC	Warning Communications Center
WESF	Waste encapsulation and storage facility
WDLC	Waste data log card
WH/COS	White House Chief of Staff
WHC	Westinghouse Hanford Company
WHO	World Health Organization
WID	Westinghouse Isolation Division
WINDS	Weather Information and Display System
WIPP	Waste Isolation Pilot Plant
WMD	Weapons of Mass Destruction



## Emergency Management Terms: Acronyms

WMDCU	Weapons of Mass Destruction Countermeasures Unit
WMDOU	Weapons of Mass Destruction Operations Unit
WPCR	Waste Package Control Record
WSI	Wackenhut Services, Inc.
WSRC	Westinghouse Savannah River Company
ZULU	Greenwich Mean Time (also see GMT)



## Emergency Management Terms: Acronyms

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