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DOE STANDARD

SENIOR TECHNICAL SAFETY MANAGER FUNCTIONAL AREA QUALIFICATION STANDARD

DOE Defense Nuclear Facilities Technical Personnel



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

AREA TRNG

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APPROVAL

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

 10.4.13

KAREN L. BOARDMAN, CHAIRPERSON
FEDERAL TECHNICAL CAPABILITY PANEL

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ACKNOWLEDGEMENT

The Office of Health, Safety and Security (HSS) is the sponsor for the Senior Technical Safety Manager (STSM) Functional Area Qualification Standards (FAQS). The sponsor is responsible for coordinating the development and/or review of the FAQS by subject matter experts (SMEs) to ensure that the technical content of the standard is accurate and adequate for Department-wide application for those involved in the STSM program. The sponsor, in coordination with the Federal Technical Capability Panel, is also responsible for ensuring that the FAQS is maintained current.

The following SMEs participated in the development of this revised Qualification Standard:

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**U.S. DEPARTMENT OF ENERGY
FUNCTIONAL AREA QUALIFICATION STANDARD**

SENIOR TECHNICAL SAFETY MANAGER (STSM)

PURPOSE

DOE O 426.1 Chg 1, *Federal Technical Capability*, commits the Department to continuously strive for technical excellence. The Technical Qualification Program (TQP), along with the supporting technical qualification standards, complements the personnel processes that support the Department's drive for technical excellence. In support of this goal, the competency requirements defined in the technical qualification standards should be aligned with and integrated into the recruitment and staffing processes for technical positions designated as STSM. The technical qualification standards should form the primary basis for developing vacancy announcements, qualification requirements, crediting plans, interview questions, and other criteria associated with the recruitment, selection, and internal placement of technical personnel.

The technical qualification standards are not intended to replace the U.S. Office of Personnel Management (OPM) qualifications standards or other Departmental personnel standards, rules, plans, or processes. The primary purpose of the TQP is to ensure that employees have the requisite technical competency to support the mission of the Department. The TQP forms the basis for the development and assignment of DOE personnel responsible for ensuring the safe operation of defense nuclear facilities.

APPLICABILITY

The STSM FAQs establishes common functional area competency requirements for all DOE STSMs who provide assistance, direction, guidance, oversight, or evaluation of contractor technical activities that could impact the safe operation of DOE's defense nuclear facilities. The technical FAQs has been developed as a tool to assist DOE Program and Field offices in the development and implementation of the TQP in their organizations. For ease of transportability of qualifications between DOE elements, Program and Field offices are expected to use these technical FAQs competencies without modification or additions. Needed additional office/site/facility specific technical competencies should be handled separately. Satisfactory and documented attainment of the competency requirements contained in this technical FAQs ensures that STSMs possess the minimum requisite competence to fulfill their functional area duties and responsibilities common to the DOE Complex. Additionally, Office/facility-specific qualification standards supplement this technical FAQs and establish unique operational competency requirements at the Headquarters or Field element, site, or facility level.

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It should be noted that the competency elements of management and leadership, general technical knowledge, departmental requirements and program implementation, administrative capability and assessment and oversight are all embodied in the competencies listed in this Standard. All of the factors above have a bearing on safety. Although the focus of this Standard is technical competence, elements, such as good communication, recognized credibility, ability to listen and process information, and the ability to guide an effort to get it right the first time are recognized as important aspects of safety.

A STSM is usually at the GS/GM-15, Excepted Service IV or V or Senior Executive Service level and assigned the direct responsibility to manage technical programs, resources, and/or Department personnel who provide assistance, direction, guidance, oversight, or evaluation of contractor technical activities impacting the safe operation of defense nuclear facilities.

IMPLEMENTATION

This FAQS identifies the minimum technical competency requirements for DOE personnel. Although there are other competency requirements associated with these positions, this FAQS identifies the specific, common technical competencies required throughout all defense nuclear facilities for STSM personnel.

The term “must” denotes a mandatory requirement; “should” denotes a recommended practice that is not required, and “may” denotes an option in this standard.

The competencies identify various levels of knowledge; or they require the individual to demonstrate the ability to perform a task or activity. These levels are defined as follows:

Familiarity level is basic knowledge of or exposure to the subject or process adequate to discuss the subject or process with individuals of greater knowledge.

Working level is knowledge required to monitor and assess operations/activities, to apply standards of acceptable performance, and to recognize the need to seek and obtain appropriate expert advice (e.g., technical, legal, safety) or consult appropriate reference materials required to ensure the safety of Departmental activities.

Demonstrate the ability is the actual performance of a task or activity in accordance with policy, procedures, guidelines, and/or accepted industry or DOE practices.

Headquarters and field elements must establish a program and process to ensure that DOE personnel possess the competencies required by their position, including the competencies identified in this technical FAQS. Documentation of the completion of the requirements of this Standard must be included in the employees’ training and qualification records. Satisfactory attainment of the competency requirements contained in this technical FAQS may be documented using the example Senior Technical Safety Manager FAQS qualification card that can be obtained from the Federal Technical Capability Program Directives and Standards page at: <http://energy.gov/hss/information-center/department-energy-technical-standards-program>.

Equivalencies must be used sparingly and with the utmost rigor and scrutiny to maintain the spirit and intent of the TQP. Equivalencies may be granted for individual competencies based

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on objective evidence of previous education, training, certification, or experience. Objective evidence includes a combination of transcripts, certifications, and in some cases, a knowledge sampling obtained through written and/or oral examinations. Equivalencies must be granted in accordance with the TQP plan of the site/office/Headquarters organization qualifying the individual. The supporting knowledge and/or skill statements and mandatory performance activities must be considered before granting an equivalency for a competency.

Training must be provided to employees in the TQP who do not meet the competencies contained in this technical FAQs. Training may include, but is not limited to, formal classroom and computer-based courses, self-study, mentoring, on-the-job training, and special assignments. Departmental training must be based on appropriate supporting knowledge and/or skill statements similar to the ones listed for each of the competency requirements.

Headquarters and field elements should use the supporting knowledge and/or skill statements as a basis for evaluating the content of any training used to provide individuals with the requisite knowledge and/or skill required to meet the technical FAQs competency requirements. Headquarters and field elements should use the supporting knowledge and/or skill statements as a basis for evaluating the content of any training.

EVALUATION REQUIREMENTS

Attainment of the competencies listed in this technical FAQs must be documented in accordance with the TQP Plan or policy of the site/office/headquarters organization qualifying the individual and the requirements in DOE O 360.1C, *Federal Employee Training*, and DOE O 426.1 Chg 1.

The qualifying official or immediate supervisor should ensure that the candidate meets the background and experience requirements of this FAQs. If the immediate supervisor is not qualified in this functional area, the supervisor should consult with a qualified individual prior to using one or a combination of the following individual competency evaluation methods:

- Satisfactory completion of a written examination
- Satisfactory completion of an oral examination
- Satisfactory accomplishment of an observed task or activity directly related to a competency
- Documented evaluation of equivalencies (such as applicable experience in the field) without a written examination

Field element managers/Headquarters program managers must qualify candidates as possessing the basic technical knowledge, technical discipline competency, and position-specific knowledge, skills, and abilities required for their positions.

Final initial qualification for STSMs must be performed through satisfactory completion of a comprehensive written examination with a minimum passing score of 80 percent and

- Satisfactory completion of an oral examination by a qualified STSM or a qualification board of technically qualified personnel that includes at least one qualified STSM or

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- Satisfactory completion of a walkthrough of a facility with a qualifying official for the purpose of verifying a candidate's knowledge and practical skills of selected key elements.

Guidance for oral interviews and written exams is contained in DOE-HDBK-1205-97, *Guide to Good Practices for the Design, Development, and Implementation of Examinations*, and DOEHDBK-1080-97, *Guide to Good Practices for Oral Examinations*.

For oral examinations and walkthroughs, qualifying officials or board members should ask critical questions intended to integrate identified learning objectives during qualification. Field element managers/headquarters program managers or designees should develop formal guidance for oral examinations and walkthroughs that includes:

- Standards for qualification
- Use of technical advisors by a board
- Questioning procedures or protocol
- Pass/fail criteria
- Board deliberations and voting authorization procedures
- Documentation process

INITIAL QUALIFICATION, REQUALIFICATION AND TRAINING

Initial qualification and requalification of STSM personnel must be conducted in accordance with the requirements of DOE O 426.1 Chg 1.

DOE Program Managers, Site/Service Center Managers or NNSA Deputy or Associate Administrators must require personnel filling STSM positions to requalify every five (5) years. The DOE STSM Departmental Sponsor/Lead or HQs FTCP Agent must establish the specific requalification training designed to update and maintain the qualifications of STSMs. DOE Program Managers, Site/Service Center Managers, or NNSA Deputy or Associate Administrators must document the requalification process which must, at a minimum include the following in accordance with DOE O 426.1 Chg 1:

- a. Requalification activities must demonstrate an evaluation of knowledge or skill on assigned competency statements or KSAs that have changed since last qualification, including items from the General Technical Basis, assigned FAQs, and applicable site/organization-specific qualification standards. Requalification should be integrated with an effective continuing training program and support continuing professional development. Requalification ensures that the proficiency requirements continue to be met.
- b. If the changes to a competency statement or KSAs (including MPAs) do not reflect substantial changes to the abilities or understanding required to successfully meet the competency, the qualifying official may consider the initial competency qualification sufficient and will acknowledge through documentation. Where substantial changes in FAQs updates are made to competency statements or KSAs (including substantially changed MPAs), the qualifying official should evaluate the changed element, assuring competency requalification to the changed competency statements or KSAs (including MPAs). Qualifying officials should determine whether

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unchanged MPA's require inclusion in requalification and provide adequate documentation.

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

- DOE
- Other government agencies
- Outside vendors
- Educational institutions

Beyond formal classroom or computer-based courses, continuing training may include:

- Self-study
- Attendance at symposia, seminars, exhibitions
- Special assignments
- On-the-job experience

A description of suggested learning activities and the requirements for the continuing education and training program for STSMs is included in Appendix A.

DUTIES AND RESPONSIBILITIES

The following are the typical duties and responsibilities expected of personnel assigned to the STSM Functional Area:

- a. Integrate safety into management and work practices to accomplish mission objectives, while ensuring worker and public health and safety, and the protection of the environment. This includes assuring that safety is fully integrated into design and construction early in a project, and that the safety basis for Defense Nuclear Facilities is adequate and understood.
- b. Comply with Departmental directives, Federal and State regulations and binding agreements through implementation of policies, directives and procedures.
- c. Allocate and manage resources, perform technical reviews, and provide technical direction and feedback to contractor and federal employees in order to meet the Department's mission safely.
- d. Recruit, select, and qualify employees to establish and maintain technical competence.
- e. Effectively communicate technical safety expectations and issues.
- f. Provide leadership in establishing and sustaining safety culture.

Position-specific duties and responsibilities for STSMs are contained in their Office/Facility-Specific Qualification Standards and/or position descriptions.

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BACKGROUND AND EXPERIENCE

The OPM *Qualification Standards Operating Manual* establishes minimum education, training, experience, or other relevant requirements applicable to a particular occupational series/grade level, as well as alternatives to meeting specified requirements.

The preferred education and experience for STSMs are:

1. Education

An STSM should possess a scientific or engineering degree with a major in an academic area that supports the functional responsibilities of the position. (Exceptions to this requirement should be considered only in rare circumstances, and then in accordance with the OPM Qualification Standards Handbook.) An advanced technical degree is considered to be an advantage. Additionally, professional credentials (e.g., Professional Engineer) and industry certifications are desirable.

2. Experience

STSMs should show a demonstrated capability to manage technical issues at the level the position requires. For example, for a management position that is narrow in scope with significant detail work, the STSM must have a level of expertise close to that of a SME. For a management position that is very broad in scope, STSMs must possess an interdisciplinary background, and must also have demonstrated technical competence in a specific area at a previous point in their careers. For supervisory or managerial positions, STSMs must also have demonstrated leadership skills. Previous or current experience as a qualified DOE Facility Representative, Quality Assurance, Safety System Oversight, Industry (Architect Engineering or Nuclear Steam Supply System) or Commercial Nuclear Utility Technical or Project Manager, Senior Reactor Operator (Licensed or Certified), Nuclear Regulatory Commission Senior Resident Inspector, or equivalent position must be considered highly beneficial. Specialized experience can be demonstrated through possession of the competencies outlined in this standard.

There may be situations where the incumbent in an identified senior technical safety management position does not meet the education and experience requirements as discussed above. In these cases, management has various options to address or compensate for this situation. In developing and implementing compensatory measures, it should be recognized that management has the responsibility to create a situation where there is an unbroken chain of fully qualified STSMs in positions of authority.

REQUIRED TECHNICAL COMPETENCIES

The competencies contained in this standard are distinct from those competencies contained in the General Technical Base (GTB) Qualification Standard. All STSM personnel must satisfy the competency requirements of the GTB Qualification Standard prior to or in parallel with the competency requirements contained in this standard. Each competency requirement defines the level of expected knowledge and/or skill that an individual must possess to meet the intent of this standard. Each competency requirement is further described by supporting knowledge and/or skill statements that which although not requirements, do describe the intent of the competency statement(s). For familiarity level competencies, the KSAs often use “demonstrate

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awareness". In selected competencies, expected knowledge and/or skills have been designated as "mandatory performance activities." In these competencies, the actions are not optional.

Note: When regulations, DOE directives, or other industry standards are referenced in the FAQs, the most recent revision should be used. It is recognized that some STSM personnel may oversee facilities that utilize predecessor documents to those identified. In those cases, such documents should be included in local qualification standards.

1. An STSM must demonstrate the ability to effectively communicate technical safety expectations and issues.

Supporting Knowledge and/or Skills:

- a. Discuss the means of developing and/or enhancing alliances with external groups (e.g., other agencies and governments, U.S. Congress, and clientele groups).
 - b. Represent and speak for the organizational unit on safety management issues (e.g., presenting, explaining, selling, defending, and negotiating) to those inside and outside the Department.
 - c. Discuss the benefits to safety management of promoting effective communication and exchange across the Department including:
 - Focused sharing of information;
 - Interaction and resolution of issues; and
 - Use of lessons learned.
 - d. Describe how the following expectations are effectively communicated within an organization to build a continuous improvement culture:
 - Development and exploration of new ideas are encouraged;
 - Process quality and safety responsibilities within the organization are understood;
 - Individuals know how their work contributes to safety objectives and strategic goals;
 - Unsafe practices, nonconforming items and potential areas for improvement are readily identified; and
 - Enhanced product and process safety and reliability are emphasized.
 - e. Prepare and present a briefing to senior management or stakeholders on the state of safety for a given facility or site.
2. An STSM must have a working level knowledge of the policies and procedures used to recruit select, and qualify employees to establish and maintain technical competency.

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Supporting Knowledge and/or Skills:

- a. Discuss planning, recruitment, and selection processes that can be used to acquire a technically competent workforce with the necessary knowledge, skills, abilities, and/or potential to accomplish the goals of the organization.
- b. Discuss the parameters of the Excepted Service Authority (ies), the circumstances which would dictate use of an Excepted Service Authority, and the process and procedures for using an Excepted Service Authority to recruit and hire.
- c. Discuss ways to motivate, reward, recognize, and retain excellent employees or recognize a major contribution to the organization using local rewards programs or programs described in the Departmental *Administrative Flexibilities* guide.
- d. Discuss the roles and responsibilities of the FTCP Panel and Panel Agents in the recruitment, selection, training, and retention of technical personnel.
- e. Describe methods used to assess an employee's unique developmental needs and why providing developmental opportunities to employees could contribute to the achievement of organizational goals.
- f. Describe in general, the training and qualification requirements for contractors specified in, DOE O 426.2, *Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities*.
- g. Discuss the responsibilities of DOE elements in meeting the requirements for the Technical Qualification Program as described in DOE O 360.1C, *Federal Employee Training*.
- h. Describe the FTCP as defined in DOE O 426.1 Chg 1 and discuss that application of the program in your organization.
- i. Describe the following three types of mentoring relationships and discuss the types of goals that an organizationally sponsored mentoring program is intended to meet:
 - Supervisor;
 - Informal; and
 - Structured-Facilitated.
- j. Discuss the benefits to the Department and individual organizational units which could be realized through use of the following:
 - Mentoring Program; and
 - Special assignment/detail.
- k. Describe the process for obtaining departmental technical assistance.
- l. Describe the process for obtaining the technical assistance of an individual from another office on a temporary or detail basis.

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- m. Describe other Departmental capabilities/resources that could be utilized to solve short-term technical safety issues.
 - n. Conduct a workforce analysis to determine the gap in needed critical technical competencies for a given facility or site.
 - o. Participate as a member of an oral examination board for qualification in a TQP functional area.
 - p. Review and evaluate the succession plan for a given facility or site.
 - q. Lead or participate in a self-assessment of the implementation of an organization's technical qualification program in accordance with DOE O 426.1 Chg 1.
3. An STSM must have a working level of knowledge of the mechanisms used to develop, approve, implement, and improve Integrated Safety Management (ISM) systems including Nuclear Safety Culture *elements such as the DOE Principles of Human Performance Improvement* described in the Human Performance Fundamentals Course (National Academy for Nuclear Training), High Reliability Organization (HRO) and Human Factor Engineering (HFE), Differing Professional Opinion (DPO) and Employee Concerns Program.

Supporting Knowledge and/or Skills:

- a. Compare, contrast, and describe organizational culture, safety culture, and safety conscious work environment as they relate to nuclear missions in DOE.
- b. Identify and discuss the safety culture lessons learned from the Fukushima, Challenger and Columbia Space Shuttle accidents and their applicability to DOE.
- c. Identify and discuss the safety culture lessons learned from the Davis-Besse Reactor Vessel Head Degradation Incident and their applicability to DOE.
- d. Given a scenario, analyze, identify, and describe potential signs of a strong or weak safety culture within an organization.
- e. Explain how the Institute for Nuclear Power Operations (INPO) Safety Culture Principles' are applied for a given organization and its associated mission in DOE.
- f. Describe the overall objective of DOE O 450.2, *Integrated Safety Management* and the associated lower-tier organization-level directives developed by Headquarters Offices and Field elements.
- g. Give an example of a circumstance that might make it necessary or reasonable to deviate from the responsibilities and authorities identified in your organization's Functions, Responsibilities, and Authorities Document and describe the exemption process in DOE O 251.1C, *Departmental Directives Program*.
- h. Discuss in detail the requirements contained in Department of Energy Acquisition Regulations (DEAR) Clauses 970.5223-1, *Integration of Environment, Safety and*

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Health into Work Planning and Execution, DEAR 970.5204-2, *Laws, Regulations and DOE Directives*, and DEAR 970.5215-3, *Conditional Payment of Fee*.

- i. Discuss in detail the process used to review and/or approve contractor ISM System Descriptions. Discuss the process used to monitor the status of Field Element and Field Element contractors' ISM systems and to monitor Field Elements' establishment and implementation of safety goals and objectives.
- j. Discuss the implementing mechanisms, including work planning and control, contained in the contractor's approved ISM System Description.
- k. Discuss in detail the DOE mechanisms used to oversee implementation of the contractor's ISM System Description.
- l. Discuss the process used to maintain and update the contractor's approved ISM System Description.
- m. Describe the approach used to assess the effectiveness of the contractor's approved ISM System.
- n. Discuss the process used to develop and approve contractor annual ISM performance objective, measures, and commitments.
- o. Explain the significance of human error in the incidences of occurrences and events.
- p. Name three of the five principles of human performance and provide a workplace example of each principle in action.
- q. Explain how individual behavior affects the frequency and severity of an occurrence or an event.
- r. Given an accident scenario, explain how latent errors in the organization affect the active errors and mistakes that lead to an accident.
- s. Describe the differing professional opinions process for issues involving nuclear safety.
- t. Describe the purpose, scope, and importance of the Department's Employee Concerns Program.
- u. Describe the responsibilities of the following in implementing DOE O 442.1A, *Department of Energy Employee Concerns Program*:
 - Headquarters and Field Office Managers; and
 - Employee Concerns Manager.
- v. Describe how employee concerns are reported, processed, and documented as stated in DOE O 442.1A and the DOE G 442.1-1, *Department of Energy Employee Concerns Program Guide*.
- w. Define whistleblower.

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- x. Identify the benefits of the Employee Concerns program.
- y. Demonstrate techniques to mitigate employees' concerns/whistleblower concerns given a specific scenario.
- z. Describe the applicability of Human Factors Engineering (HFE) to DOE facilities and operations, including where in the life cycle and functional areas it may be used.
- aa. Identify and discuss the role and use of human factors approaches and methodologies in hazard and accident analysis.
- bb. Identify and discuss aspects of person-machine interface that can degrade or enhance the performance of personnel.
- cc. Discuss the influence of management and organizational factors on performance.
- dd. Identify when a HFE SME involvement/engagement is necessary.

Mandatory Performance Activities:

- a. Lead or participate in an assessment of a site or facility's implementation of Integrated Safety Management; or lead or participate in a site or program safety culture assessment; or lead or participate in a differing professional opinion panel.
4. An STSM must have a working level knowledge of the content of the safety basis requirements, as described in 10 Code of Federal Regulations (CFR) 830, *Nuclear Safety Management*, Subpart B, *Safety Basis Requirements*, and familiarity level knowledge of the related DOE orders, standards, and guides.

Supporting Knowledge and/or Skills:

- a. Discuss the purpose and objectives of the nuclear facility safety basis program.
- b. Discuss each of the following nuclear safety orders, standards, guides, and handbooks and relate each of them to establishing and maintaining the safety basis requirements for a given facility:
 - DOE O 420.1C, *Facility Safety*;
 - DOE G 421.1-2A, *Implementation Guide For Use in Developing Documented Safety Analyses to Meet Subpart B of 10 CFR 830*;
 - DOE G 423.1-1A, *Implementation Guide For Use In Developing Technical Safety Requirements*;
 - DOE G 424.1-1B, *Implementation Guide For Use In Addressing Unreviewed Safety Question Requirements*;
 - DOE O 425.1D, *Verification of Readiness to Startup and Restart of Nuclear Facilities*;
 - DOE O 460.1C, *Packaging and Transportation Safety*;
 - DOE G 460.1-1, *Implementation Guide for Use with DOE O 460.1A, Packaging and Transportation Safety*;

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- DOE-STD-1020-2012, *Natural Phenomena Hazards Analysis and Design Criteria for Department of Energy Facilities*;
 - DOE-STD-1027-92 (CH-1), *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports [SAR]*;
 - DOE-STD-1083-2009, *Processing Exemptions to Nuclear Safety Rules and Approval of Alternative Methods for Documented Safety Analyses*;
 - DOE-STD-1104-2009, *Review and Approval of Nuclear Safety Basis and Safety Design Basis Documents*;
 - DOE-STD-1120-2005, *Integration of Environment, Safety, and Health into Facility Disposition Activities, Volumes 1 and 2*;
 - DOE-STD-1186-2004, *Specific Administrative Controls*;
 - DOE-STD-3009-94 (Change Notice 3), *Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Documented Safety Analyses* ;
 - DOE-HDBK-3010-94, *Airborne Release Fractions/Rates and Respirable Fractions for Nonreactor Nuclear Facilities, Volumes 1 and 2*;
 - DOE-STD-3011-2002, *Guidance For Preparation Of Basis For Interim Operation (BIO) Documents*;
 - DOE-STD-1066-2012, *Fire Protection*;
 - DOE-STD-3014-2006, *Accident Analysis for Aircraft Crash into Hazardous Facilities*;
 - 10 CFR 820, *Procedural Rules for DOE Nuclear Activities*; and
 - 10 CFR 830, Subpart B, *Safety Basis Requirements*.
- c. Discuss the development and maintenance of programs and documents that implement the requirements of 10 CFR 830, Subpart B for DOE and contractors authorized to operate nuclear facilities.
- d. Discuss the following items in the context of safe operation of a nuclear facility:
- Authorization Basis;
 - Documented Safety Analysis;
 - Fire Hazard Analysis;
 - Graded approach;
 - Limiting Conditions for Operation;
 - Limiting Control Setting;
 - Operational Readiness Review;
 - Preliminary Documented Safety Analysis;
 - Potential Inadequacies of the Safety Analysis (PISA);
 - Readiness Assessment;
 - Structures, Systems, and Components (SSCs);
 - Safe Harbor Methodologies;
 - Safety Analysis Report for Packaging;
 - Safety Basis;
 - Safety Class SSCs;
 - Safety Evaluation Report;
 - Safety Limits;
 - Safety Significant SSCs;
 - Shipper Receiver Agreements;

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- Specific Administrative Controls;
 - Startup Notification Report;
 - Surveillance Requirements;
 - Technical Safety Requirement (TSR);
 - Design Basis; and
 - Unreviewed Safety Questions (USQ) process.
- e. Describe how TSRs are derived, how they are used, and what constitutes a violation.
- f. Discuss the hazard categorization levels, chemical hazard classification levels, and the process utilized to determine the facility hazard category or classification.
- g. Discuss the reasons for performing a USQ determination.
- h. Discuss the responsibilities of DOE and contractors authorized to operate nuclear facilities for the performance of USQ determinations.
- i. Discuss the actions to be taken by a contractor and DOE upon identifying information that indicates a PISA.
- j. Discuss the actions to be taken by a contractor and DOE if it is determined that a PISA exists.
- k. Describe the safety basis documents for the facilities in the STSM's organization and how they are prepared, reviewed, approved, and updated:
- The safety basis documents for the facilities under the purview of the STSM's organization;
 - The scope of operations, hazards, postulated accidents, and controls/requirements for the assigned facilities as documented in the safety basis documents;
 - The safety basis documentation preparation, revision, and update processes and the associated responsibilities of the contractor and DOE;
 - The review and approval processes for safety basis documents and the associated responsibilities of the contractor and DOE;
 - The level of approval authority as it relates to Facility Hazard Categorization and Classification and safety basis documents;
 - The steps in the preparation, review, and approval of a safety evaluation report;
 - The process for flow down of controls and requirements and the derived operating procedures, processes, and programs; and identify the conditions and procedures used to maintain and modify safety documents.
- l. Discuss the purpose, content, and philosophy, as appropriate to the position, of the following safety management standards for nuclear explosive safety:
- DOE O 452.1D, *Nuclear Explosive and Weapons Surety Program*;
 - DOE O 452.2D, *Nuclear Explosive Safety*;
 - DOE O 461.1B, *Packaging and Transportation for Offsite Shipment of Materials of National Security Interest*;

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Mandatory Performance Activities:

Complete at least one of the following activities:

- a. Review and evaluate a USQ Determination, including walking down the proposed change/potential inadequacy.
 - b. Review and evaluate a Safety Evaluation Report (SER).
 - c. Walk down a facility with Safety System Oversight person, safety analyst or SME identifying the safety controls contained in a TSR.
 - d. Complete a review of a hazard analysis or accident analysis including walking down the scope of work area or accident scenario.
5. An STSM must have a familiarity level knowledge (demonstrate awareness) of environmental standards, laws, and regulations; and must have a working level knowledge of the safety impacts of the application of environmental standards, laws, and regulations, and waste management principles and practices.

Supporting Knowledge and/or Skills:

- a. Demonstrate awareness of sources of environmental requirements, such as Federal and state statutes, regulations, and DOE orders.
- b. Demonstrate awareness of the organization, mission, and enforcement authorities of the U.S. Environmental Protection Agency (EPA).
- c. Discuss the *National Environmental Policy Act* (NEPA) process and the role of the Department and its contractors in implementation.
- d. Describe the role(s) of a DOE contractor with respect to compliance with environmental laws and regulations, and discuss the responsibilities of the Federal staff employees for management and oversight of the DOE contractor for such compliance.
- e. Demonstrate awareness of environmental requirement liabilities.
- f. Discuss ISO 14001, *Environmental Management Systems (EMS)*, and their relevance to DOE and contractor performance.
- g. Discuss awareness of definitions of the following types of waste that may be provided in Federal laws and regulations:
 - Low level waste;
 - High level waste;
 - Transuranic waste; and
 - Mixed waste.
- h. Discuss the Department's policies and practices regarding the handling and management of waste as described in DOE O 435.1, Chg 1, *Radioactive Waste*

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Management.

- i. Demonstrate awareness of the Department's performance objectives and performance assessment requirements as outlined in DOE O 435.1, Chg 1.
 - j. Demonstrate awareness of the Department's policies on waste management, with a focus on safety, including:
 - Generation reduction;
 - Segregation;
 - Minimization;
 - Pollution prevention; and
 - Disposal.
 - k. Demonstrate awareness of how the following Acts apply to and impact the Department's waste management programs:
 - *Federal Facility Compliance Act (FFCA)*;
 - *Pollution Prevention Act of 1990*; and
 - *Superfund Amendment Reauthorization Act*.
 - l. Discuss the general requirements of Section 3116 of the 2005 *National Defense Authorization Act* regarding appropriate classification of waste.
 - m. Discuss the general requirements of the *Resource Conservation and Recovery Act* of 1976 as it applies to hazardous and mixed waste.
 - n. Discuss the process for determining whether or not waste is hazardous.
 - o. Demonstrate awareness of the general requirements and issues associated with the transportation and packaging of radioactive wastes.
 - p. Conduct an assessment of waste management practices at a given site/facility and prepare a report on how these practices can be improved.
 - q. Participate on an environmental assessment team, preparing and reporting the team's results to senior federal and contractor management.
6. An STSM must have a working level knowledge of the application of worker protection standards.

Supporting Knowledge and/or Skills:

- a. Demonstrate awareness of sources of occupational safety and health rules, such as Federal and State statutes, regulations, and orders (e.g., DOE O 440.1B, Chg1, *Worker Protection Program for DOE (Including the National Nuclear Security Administration) Federal and Contractor Employees*, and 10 CFR 851, *Worker Safety and Health Program*).
- b. Describe how the ISM core functions and principles and the quality assurance (QA) criteria are integrated into the activity-level work planning and control processes for

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protection of the workers at a given facility or site.

- c. Describe the relationships and authorities among DOE, NNSA, and the Occupational Safety and Health Administration (OSHA) for enforcement of safety and health requirements at DOE sites.
 - d. Discuss awareness that occupational safety and health requirements are enforceable criminally and civilly.
 - e. Describe the role(s) the contractor plays in implementing occupational safety and health regulations.
 - f. Describe the criteria for designating and processing occupational health and safety concerns.
 - g. Participate in an assessment of the implementation of safety and health requirements at a given facility or site and report the results to senior federal and contractor management.
 - h. Discuss management systems in supporting enforcement of worker safety and health requirements.
7. An STSM must have a working level knowledge of the Department's Emergency Management System including resources, emergency plans, external agency involvements, interagency relationships, and the command and control function during an emergency.

Supporting Knowledge and/or Skills:

- a. Discuss the roles and responsibilities of the Departmental elements for management of the Department's Emergency Management System as defined in DOE O 151.1C, *Comprehensive Emergency Management System*.
- b. Demonstrate awareness with the objectives of DOE O 153.1, *Departmental Radiological Emergency Response Assets*.
- c. Define "Operational Emergencies" and the circumstances to which they apply as defined in DOE O 151.1C.
- d. Discuss the concept of Emergency Public Information and the different roles of the Department's Public Affairs Office and the Joint Information Center in disseminating information in an emergency.
- e. Discuss the involvement of external agencies in the Department's Emergency Management System.
- f. Describe the contents, the requirements for, and where each of the following types of emergency plans can be located on-site:
 - Site Emergency Plan;
 - Facility Emergency Plan;

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- Building Emergency Plan;
- Security Emergency Plan;
- Fire Prevention/ Suppression Plan;
- Worker Safety Plan(s); and
- Continuity of Operations Plan.

Mandatory Performance Activity:

- Participate in the Emergency Operations Center (EOC) during a site emergency management drill. Prior to participation in the drill, complete Emergency Manager Training or EOC training and the Federal Emergency Management Administration (FEMA) Emergency Management Institute IS-700.A “National Incident Management System (NIMS) and Introduction” course.
8. An STSM must have working level knowledge of conduct of operations, and conduct of engineering, including formal configuration and maintenance management as it relates to safety.

Supporting Knowledge and/or Skills:

- Describe the reason for implementing conduct of operations at DOE facilities.
- Discuss the requirements for implementing conduct of operations at DOE facilities and the associated impact on safety and efficiency of operations.
- Discuss the purpose and describe the roles and responsibilities of the STSM in implementing DOE O 422.1, *Conduct of Operations*.
- Discuss the concept of “graded approach” and how it applies to the implementation of conduct of operations.
- For each of the 18 specific requirements in DOE O 422.1 Attachment 2, describe how each activity contributes to an effective and safe operational environment.
- Describe the types of operations where formal conduct of operations apply.
- Discuss how the self-assessment process is applied to ensure safe operations.
- Working with a qualified DOE Facility Representative in a given facility, review/assess the conduct of operations or work in progress in the facility. Develop a report of your findings and discuss it with the contractor facility management.
- Describe DOE O 433.1B, *Maintenance Management Program for DOE Nuclear Facilities* to explain:
 - DOE’s role in the oversight of contractor maintenance operations;
 - The intent of maintenance management programs;
 - The Department’s policy and objectives for maintenance management; and
 - The responsibilities and authorities for maintenance management programs.

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- j. Discuss the requirements for the control and integration of contractor and subcontractor personnel in maintenance activities.
- k. Discuss the graded approach process by which Department line management oversees facility maintenance management activities.
- l. Discuss how maintenance activities interface with the following as it relates to safety:
 - Conduct of operations;
 - Quality assurance;
 - Configuration management;
 - Safety structures, systems and components;
 - Authorization safety basis;
 - Design basis; and
 - Suspect/counterfeit items.
- m. Review and evaluate the adequacy of a work package
- n. Observe in the field and evaluate the conduct of maintenance work utilizing a work package from start to finish.
- o. Discuss the roles and responsibilities of the STSM related to implementing and maintaining configuration management programs.
- p. Discuss the concept of configuration management and its importance in ensuring operational safety.
- q. For the elements identified above, describe the possible effects on safe operations if they are ineffectively implemented.
- r. Describe a typical configuration management process.
- s. Utilizing DOE O 420.1C, *Facility Safety*, discuss the system engineer concept as it applies to oversight of safety systems. Specifically address the areas of configuration management, assessment of system status and performance, and technical support for operations, maintenance activities and for Documented Safety Analysis reviews.
- t. Discuss each of the following elements of configuration management and how they contribute to safety and an effective configuration management program.
 - Program management;
 - Document control;
 - Change control;
 - Graded approach;
 - Design requirements; and
 - Assessments.
- u. Discuss approved/recommended compensatory actions where inadequate configuration management exists and work is ongoing or to be initiated.

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- v. Using system drawings walk down and assess the configuration management, operability, and reliability of a safety-class or safety-significant system in a facility with system engineer/safety system oversight (SSO) personnel.

Mandatory Performance Activities:

- a. Participate in an assessment of facility conduct of operations, or complete a facility walk through with a qualified facility representative and provide a report to the facility representative on potential conduct of operations concerns that were observed.
9. An STSM must have a familiarity level knowledge (demonstrate awareness) of security directives, standards, and general requirements; and must have a working level knowledge of safeguards and security as it impacts safety.

Supporting Knowledge and/or Skills:

- a. Define the terms “safeguards” and “security” as they apply to the DOE Safeguards and Security Program.
 - b. Discuss a Site Safeguards and Security Plan (SSSP), to include:
 - Content and purpose;
 - Review/approval cycle;
 - Graded Security Protection (GSP);
 - Process (e.g., vulnerability assessments); and
 - System effectiveness (P_E) reporting.
 - c. Demonstrate awareness of the purpose, interrelationship, responsibilities, and basic requirements for the following:
 - Physical security;
 - Personnel security; and
 - Material control and accountability.
 - d. Demonstrate awareness of information security systems within DOE.
 - e. Discuss the interrelationship between safeguards and security to safety practices and facility operations.
 - f. Participate and/or review the results of an audit of safeguards and security practices at a given facility or site.
 - g. Demonstrate awareness of the scope and application of 10 CFR 824, *Procedural Rules for the Assessment of Civil Penalties for Classified Information Security Violations*, and the potential ramifications for failing to comply with classified information security requirements.
10. An STSM must have a working level knowledge of technical management and performance assessment, and DOE directives structure and their relationship to applicable laws, rules, Federal/state regulations and industry standards.

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Supporting Knowledge and/or Skills:

- a. Identify the three major DOE contract types and describe the characteristics, and the advantages and disadvantages of each.
- b. Identify and discuss the types of contracting processes that are used to put major contracts in place.
- c. Discuss how the Statement of Work is developed and contract deliverables are identified, including:
 - Technical specification(s);
 - Quality assurance requirements; and
 - Technical review and acceptance of deliverables.
- d. Discuss the following terms as they apply to financial accountability:
 - Incentives (Award Fee, Conditional Payment of Fee (CPOF), Fee Withholding);
 - Fines and penalties;
 - Third-party liabilities;
 - Loss of, or damage to, Government property; and
 - Allowable and non-allowable costs.
- e. Discuss the technical oversight and qualifications required to assess contractor performance and the training of contractor employees.
- f. Discuss the fee-based evaluation process including the development of performance criteria, conduct of the evaluation, and documentation and transmittal requirements for performance.
- g. Identify who can make contractual requests or approvals of contract provisions, and the qualifications required of that individual(s).
- h. Discuss the intent of the DEAR Clause, 970.5223-1, regarding environment, safety, and health (ES&H).
- i. Participate on a team reviewing the contractor's subcontracting practices.
- j. Discuss the purpose and the relationship between DOE Orders, directives, Federal regulations, and State regulations.
- k. Discuss the DOE directives process.
- l. Discuss the DOE rule-making process.
- m. Discuss the relationship between the DOE and other agencies, such as OSHA, Nuclear Regulatory Commission (NRC) and EPA.
- n. Discuss the purpose of the *Federal Facility Compliance Act* (FFCA).

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- o. Discuss the use of Memoranda of Understanding (MOU) and Memoranda of Agreement (MOA) with external agencies and organizations.
 - p. Discuss the directives flow down and their relationship to Contract List A and List B.
 - q. Discuss Public Law 104-113 regarding the use of industry consensus standards.
 - r. Discuss the purpose of the *Federal Advisory Committee Act* (FACA).
11. An STSM must have a working level knowledge of the Price-Anderson Amendments Act of 1988 (PAAA) and its impact on DOE nuclear safety activities.

Supporting Knowledge and/or Skills:

- a. Demonstrate an understanding of the PAAA.
 - b. Demonstrate an understanding of the Act's applicability to the Department's nuclear safety activities, and specifically to each of the site's facilities and major activities.
 - c. Demonstrate an understanding that violations of applicable nuclear safety rules and regulations are enforceable criminally and civilly.
 - d. Demonstrate an understanding of the topics below, associated with the PAAA:
 - Procedural Rules for DOE Nuclear Activities (10 CFR 820);
 - Documented Safety Analyses (10 CFR 830 Subpart B);
 - Unreviewed Safety Questions (10 CFR 830 Subpart B);
 - Quality Assurance Requirements (10 CFR 830 Subpart A);
 - Technical Safety Requirements (10 CFR 830 Subpart B); and
 - Occupational Radiation Protection (10 CFR 835).
 - e. Discuss the role of Federal line management with respect to implementing the requirements of the PAAA.
 - f. Discuss the role of the site's Enforcement or PAAA Coordinator.
 - g. Review the supporting management systems (e.g. Noncompliance Tracking System (NTS)) and recent PAAA notices and decisions with the site's Enforcement or PAAA Coordinator to determine close-out status and verification of corrective actions.
12. An STSM must have a working level knowledge of the Defense Nuclear Facilities Safety Board's (DNFSB) purpose and its interaction with the DOE.

Supporting Knowledge and/or Skills:

- a. Discuss the enabling legislation and the purpose of the DNFSB.
- b. Identify and discuss applicable DNFSB Recommendations.
- c. Identify and discuss Department Implementation Plans and commitments made in response to DNFSB Recommendations.

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- d. Discuss the roles and responsibilities of the Departmental Representative to the DNFSB as described in DOE M 140.1-1B, *Interface with the Defense Nuclear Facilities Safety Board*.
 - e. Prepare and/or participate in a briefing, Implementation Plan, or other correspondence to the DNFSB on the status of a Departmental activity or initiative.
13. An STSM must have a working level knowledge of Contractor Assurance Systems and risk management including problem identification, solving, and decision making techniques.

Supporting Knowledge and/or Skills:

- a. Identify the responsibilities of Heads of Field Elements/Heads of Contracting Activities in providing oversight of contractor activities as described in DOE O 226.1B, *Implementation of DOE Oversight Policy*.
- b. Discuss the principles and concepts of risk management and its application in oversight programs, requirements development, and corrective action development.
- c. Identify and discuss the minimum elements of a contractor assurance system.
- d. Describe and explain the application of problem analysis techniques in:
 - Root cause analysis;
 - Causal factor analysis;
 - Change analysis; and
 - Barrier analysis.
- e. Describe and explain the application of the following Root Cause Analysis processes in the performance of occurrence investigations:
 - Events and causal factors charting;
 - Root cause coding; and
 - Recommendation generation.
- f. Describe the elements of an effective issues management system and its importance to safety.
- g. Discuss the necessary considerations that must be addressed when developing a corrective action.
- h. Discuss the actions taken as the result of problem identification or an occurrence.
- i. Describe the assessment requirements and limitations associated with the interface with contractor employees.
- j. Explain the essential elements of the below activities including:
 - Investigation;

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- Fact-finding;
 - Reporting;
 - Tracking to closure;
 - Follow-up; and
 - Corrective Action Implementation.
- k. Describe the actions to be taken if the contractor challenges the assessment findings and explain how such challenges can be avoided.
- l. Discuss the key processes used in the trending and analysis of operations.
- m. Discuss the key process to develop and implement metrics and performance measures, validate performance against metrics and performance measures, and trend/analyze data to establish a continuous improvement program.
- n. Discuss the importance and key elements of the following:
- Maintenance history;
 - Operational incident/occurrence report data;
 - Security infractions;
 - Safety incidents;
 - Radiation exposure and incident reporting;
 - Schedule variances; and
 - Counterfeit and suspect parts.
- o. Using DOE O 231.1B, Admin Chg 1, *Environment, Safety, and Health Reporting*, and DOE O 232.2, *Occurrence Reporting and Processing of Operations Information*, discuss the role of an STSM related to reportable occurrences. Given an occurrence report, determine whether:
- Review processes are adequate;
 - Causes are appropriately defined;
 - Corrective actions address causes;
 - Lessons learned are appropriate; and
 - Corrective actions are completed.
- p. Discuss the process for preparing a minority report and explain the importance of encouraging and evaluating differing professional/technical opinions.
- q. Lead a team to conduct compliance-based and performance-based assessments. Identify the differences in outcomes and the reasons for these differences.
- r. Write, or review and approve, an assessment report.
- s. Based on an evaluation of contractor activities, review and approve corrective actions and recommendations, and communicate the results to contractor management.
- t. Participate in formal meetings between Federal line management and assessed contractor organization management to discuss the results of the assessments.

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- u. Given incident/occurrence report data for a specified period, analyze the information for contributing factors and safety trends.
 - v. Given the data for an event, determine the root cause and develop corrective actions. Compare the results with that of the originator. Discuss any differences.
14. An STSM must have a familiarity level knowledge (demonstrate awareness) to understand program and project management; and must have a working level knowledge to effectively manage programs and projects utilizing the processes and procedures necessary to address safety impacts of departmental activities, including some knowledge of the mission and key programs.

Supporting Knowledge and/or Skills:

- a. Discuss the Department's policy for planning, programming, budgeting, and acquisition of capital assets as described in DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*.
- b. Define the following terms:
 - Baseline;
 - Graded approach;
 - Infrastructure;
 - Life-cycle;
 - Programmatic management; and
 - Metrics and performance measures.
- c. Describe the key elements of supervising/monitoring program activities and contractors.
- d. Describe the purpose of schedules, and discuss the use of milestones and activities.
- e. Define and compare the terms cost estimate and budget.
- f. Describe the process for preparing cost estimates and budgets.
- g. Demonstrate awareness of the relationship between following terms:
 - Budgeted Cost of Work Scheduled (BCWS);
 - Budgeted Cost of Work Performed (BCWP); and
 - Actual Cost of Work Performed (ACWP).
- h. Discuss how priorities should be balanced to achieve the following:
 - Resources are effectively allocated to address safety, programmatic, and operational considerations; and
 - Protecting the public, the workers, and the environment is a priority whenever activities are planned and performed.
- i. Discuss DOE's budgeting process to capture funding decisions based on

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- prioritization of work.
- j. Demonstrate awareness of the requirements to procure external products and services for DOE projects.
 - k. Demonstrate awareness of the methods for procuring DOE or other government products and services.
 - l. Discuss the responsibilities, authorities, and implementation requirements for DOE O 430.1B, Chg 2, *Real Property and Asset Management*, at defense nuclear facilities.
 - m. Compare and contrast the project manager and program manager qualification requirements at a given office or site.
 - n. Manage or oversee the performance of a given project or program that has a minimum duration of six months.
15. An STSM must have a working level knowledge of quality assurance policies, programs, and processes.

Supporting Knowledge and/or Skills:

- a. Describe the general requirements, purpose, interrelationships, and importance of DOE O 414.1D, *Quality Assurance*; 10 CFR 830, *Nuclear Safety Management*; 10 CFR 830 Subpart A, *Quality Assurance Requirements*; and national or international consensus standards on quality assurance.
- b. Describe how ASME NQA-1-2008 with the NQA-1a-2011 addenda, *Quality Assurance Requirements for Nuclear Facility Applications*, is applied to implement the QA criteria.
- c. Describe how the QA requirements are related to the Documented Safety Analysis.
- d. Describe the DOE and contractor responsibilities and requirements for implementing a Quality Assurance Program (QAP).
- e. Discuss the role of STSMs with respect to DOE O 414.1D, 10 CFR 830, and 10 CFR 830 Subpart A.
- f. Describe the 10 quality assurance criteria of DOE O 414.1D and 10 CFR 830 Subpart A which address the following:
 - Management;
 - Performance; and
 - Assessment.
- g. Referring to the following DOE Guides supporting DOE O 414.1D and 10 CFR 830 Subpart A, discuss the implementation of an effective QAP.
 - DOE G 414.1-1B, *Management and Independent Assessment Guide for Use with 10 CFR Part 830, Subpart A, and DOE O 414.1D, Quality Assurance*; and DOE

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O 226.1B, Implementation of DOE Oversight Policy,

- DOE G 414.1-2B, Admin Chg 1, *Quality Assurance Program Guide, and;*
- DOE G 414.1-4, *Safety Software Guide for Use with 10 CFR 830, Subpart A, Quality Assurance Requirements, and DOE O 414.1C, Quality Assurance.*

- h. Describe the scope, purpose, and application of the safety software quality assurance requirements and work practices.
 - i. Discuss how the approved Quality Assurance Program at a given DOE site office or contractor is applied to safety system design, construction and operations, and implementation of its ISMS. Address how the 10 QA criteria and the 12 safety management principles/functions are integrated and the approach used, and importance of effectiveness of the flow-down of QA criteria to subcontractors.
16. An STSM must have a working level knowledge of radiation protection program requirements described in 10 CFR 835 and related DOE Orders, Standards, and Guides.

Supporting Knowledge and/or Skills:

- a. Discuss the purpose and objectives of a DOE Radiation Protection Program.
- b. Identify and explain the general and unique radiological hazards associated with the following (as applicable to the STSM):
 - Plutonium operations;
 - Uranium operations;
 - Tritium operations;
 - Nuclear explosive operations;
 - Production/experimental reactors;
 - Accelerator operations;
 - Waste handling/processing operations;
 - Decontamination and decommissioning;
 - Use of radiation generating devices; and
 - Environmental restoration activities.
- c. Discuss how the radiation protection program is related to the nuclear safety basis (and Documented Safety Analysis) for the STSM's cognizant facility(s) and activities.
- d. Identify and discuss the required elements of a radiation protection program including the requirements for internal audits.
- e. Discuss the role of the following radiation protection policy, guides and standard in establishing and maintaining a radiation protection program for a given DOE nuclear facility/activity:
 - DOE G 441.1-1C Admin Chg 1, *Radiation Protection Programs Guide for Use with Title 10, Code of Federal Regulations, Part 835, Occupational Radiation Protection;* and
 - DOE-STD-1098-2008, *Radiological Control.*

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- f. Discuss the requirements delineated in DOE O 458.1 Chg 2, *Radiation Protection of the Public and the Environment*.
- g. Identify key controls the Department and its contractors use for contamination control.
- h. Conduct an assessment of the radiation protection program at a given site/facility and report the results to DOE management.
- i. Review a radiation protection program assessment for a DOE nuclear facility/activity; evaluate proposed corrective actions and discuss the results of the review with the DOE radiation protection program subject matter expert.

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APPENDIX A

CONTINUING EDUCATION, TRAINING AND PROFICIENCY PROGRAM

This Standard requires requalification every 5 years.

Headquarters or field element managers must ensure the following:

1. Establish expectations related to the performance of duties and responsibilities in this FAQs, considering regulatory and/or contractual requirements as appropriate.
2. Identify specific continuing training requirements in the site/office/position specific qualification standard(s) or procedures.
3. Approve all established continuing training requirements related to defense nuclear facility safety oversight as determined for their office or site.

STSM personnel must complete continuing technical education and/or training covering topics directly related to the STSM FAQs as determined by the appropriate headquarters or field element managers as follows:

1. Address changes to DOE directives, guides, standards, policies, and rules since the last qualification was completed.
2. Perform practical factor exercises as appropriate, especially those that are mandatory and others as required by the associated FAQs.
3. Attend seminars, symposia, or technical meetings related to STSM as resources are available.

Note: Continuing technical education and/or training may include courses/training provided by the DOE, other government agencies, outside vendors, or local educational institutions. Continuing training topics should also address identified weaknesses in the knowledge or skills of the individual personnel, and current technical issues related to the associated FAQs. Where continuing education is mandatory for maintaining professional registration (e.g., Professional Engineer) or professional certification (e.g., Certified Health Physicist), this will normally be sufficient, and only needs to be augmented by DOE directives reviews and any site-specific requirements (e.g., new/revised DSAs).

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CONCLUDING MATERIAL

Review Activity:

EM
NNSA
HSS
NE
SC

Preparing Activity:

HS-10/DOE FTCP

Project Number:

TRNG-0082

Field and Operations Offices:

CBFO
CH
ID
OR
ORP
RL
SR

Site Offices:

Argonne Site Office
Berkley Site Office
Brookhaven Site Office
Fermi Site Office
Livermore Field Office
Los Alamos Field Office
Nevada Field Office
New Brunswick Laboratory
Nuclear Production Office
Oak Ridge Site Office
Pacific Northwest Site Office
Princeton Site Office
Savannah River Field Office
Sandia Field Office
Stanford Site Office
Thomas Jefferson Site Office