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**DOE-STD-8003-2023
December 2023**

DOE STANDARD

WORKER SAFETY AND HEALTH PROGRAM 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 Capabilities Panel (FTCP) is responsible for reviewing and approving Functional Area Qualification Standards (FAQS) for Department-wide application. Approval of this FAQS by the Federal Technical Capabilities Panel is indicated by signature below.

Gabriel M. Pugh

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Date

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ACKNOWLEDGMENT

The Department of Energy (DOE) Office of Enterprise Assessments, National Training Center (EA-50), FTC Support Office facilitated the development of this Worker Safety and Health (WSH) FAQs.

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ACRONYMS

AED	Automated External Defibrillator
CAIRS	Computerized Accident Incident Reporting System
CAS	Contractor Assurance System
CFR	Code of Federal Regulations
CPR	Cardiopulmonary Resuscitation
CT	Continuing Training
DART	Days Away, Restricted, or Transferred
DOE	Department of Energy
EA	Office of Enterprise Assessments
eTQP	Electronic Technical Qualification Program database
FAQS	Functional Area Qualification Standard
FEOSH	Federal Employee Occupational Safety and Health
FTCP	Federal Technical Capabilities Panel
GTB	General Technical Base
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
JTA	Job Task Analysis
LOTO	Lockout/Tagout
M&O	Management & Operations
MPA	Mandatory Performance Activity
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
NTC	National Training Center
NTS	Non-Compliance Tracking System
O	Order
ORPS	Occurrence Reporting and Processing System
OSHA	Occupational Safety and Health Administrator
PC	Performance Competencies
QO	Qualifying Official
QS	Qualification Standard
SPOMC	Safety Performance Objectives, Measures, and Commitment
TQP	Technical Qualification Program
TRCR	Total Recordable Case Rate
WP&C	Work Planning and Control
WSH	Worker Safety and Health
WSHP	Worker Safety and Health Program

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U.S. DEPARTMENT OF ENERGY FUNCTIONAL AREA QUALIFICATION STANDARD

Worker Safety and Health Program

PURPOSE

Functional area qualification standards (FAQS) establish common performance competencies in key nuclear facility functional areas for personnel in the Department of Energy (DOE) Technical Qualification Program (TQP).

This FAQS establishes a common set of performance competencies to ensure designated personnel have the technical competency to perform the duties and responsibilities of a Worker Safety and Health (WSH) professional.

The content of this FAQS should be referenced and used, as appropriate, to develop vacancy announcements, interview questions, and other criteria associated with the recruitment, selection, and internal placement of personnel assigned this FAQS.

APPLICABILITY

The DOE Order (O) 426.1, Federal Technical Capabilities, requires FAQS to be developed in specific areas as a tool to assist DOE Program and Field Offices/Sites with implementation of their organization-specific TQP.

The WSH FAQS establishes common performance competencies for all DOE personnel who perform WSH duties and responsibilities. For ease of transportability of qualifications between DOE elements, Program and Field Offices/Sites must use this FAQS without modification or addition to the performance competency knowledge requirements.

Satisfactory and documented attainment of the performance competencies in this FAQS ensures personnel possess the minimum requisite knowledge and skills to perform WSH duties and tasks common to the DOE enterprise. DOE O 426.1 requires organization-specific qualification standards to supplement this FAQS and establish unique performance competencies at the organization (headquarters, field element, site, or facility) level.

IMPLEMENTATION

This FAQS, derived from a WSH Job Task Analysis is comprised of performance competencies based on task performances. Each performance competency includes knowledge requirements and any mandatory performance activities (MPA) that need to be completed to demonstrate that the performance competency has been met.

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Evaluation guides have been developed that provide the expected level of knowledge that personnel assigned this FAQS must obtain for each related knowledge requirement, and for designated qualifying officials (QO) who are responsible for verifying the attainment of these knowledge requirements. The evaluation guides for this FAQS are available through the NTC TQP support site at:
<https://ntc.doe.gov/sites/tqp/tqpportal/TechnicalQualificationResources/Forms/Resources.aspx>.

The performance competencies in this FAQS include unique DOE knowledge requirements that the candidate must obtain and then apply to specific job tasks that are identified as mandatory performance activities (MPAs) in this FAQS. The overall objective of the MPAs is to determine whether the WSH professional can apply the related knowledge to satisfactorily perform the associated job task.

This FAQS is comprised of required common WSH knowledge competencies followed by appendices with topical area performance competencies. For initial qualification, all Federal WSH personnel assigned this FAQS must demonstrate attainment of the knowledge in the "Required Performance Competencies" section.

Upon completion of the required WSH competency section of this FAQS, personnel may be assigned one or more appendices within the selected topical area. Supervisors should select the appendices that must be completed in their entirety based on the specific duties and responsibilities assigned to the individual WSH participant. If any duties are changed, supervisors should follow the requirements in DOE Order 426.1 to determine if the participant may be assigned any other applicable technical qualification standards.

The MPAs listed in this FAQS are required to be satisfactorily performed only once. If, during a performance of the MPA, any of the evaluation criteria are not satisfactorily met, the designated QO may require the candidate to perform the MPA again. In these cases, satisfactory completion of the MPA only needs to be documented once.

Some of the MPAs in this FAQS may already be included in organization-specific qualification standards. In these cases, the designated QO needs to verify the documentation prepared by the candidate and then document the accommodation (as a part of this FAQS or during completion of the organization specific qualification standard).

Candidates should perform the MPAs listed in the FAQS in their normal work environment, such as in assigned facilities or areas where the associated mission work is being accomplished. Supervisors may use other options to facilitate completion of the MPA requirements in cases where candidates cannot perform the MPAs exactly as written in their normal work environment within the required qualification timeframe. This could include performance of the MPA in a simulated environment or minor accommodations to the MPA or MPA evaluation criteria to fit local conditions and limitations as agreed upon by the QO. The reason for any accommodations for the MPA must be documented by the designated qualification official with approval of the supervisor and local Federal Technical Capabilities Panel (FTCP) agent.

EVALUATION CRITERIA

Attainment of the performance competency knowledge requirements and MPAs listed in this FAQS must be documented per the TQP plan (or the policy of the specific organization qualifying the individual) and the requirements in DOE O 426.1, *Federal Technical Capabilities*.

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Each performance competency includes knowledge requirements or MPAs that require completion to demonstrate the performance competency was met. Attainment of the performance competency knowledge requirements or MPAs listed in this FAQs must be verified by a designated QO using one or a combination of the following methods listed in DOE O 426.1:

- Satisfactory completion of a written examination
- Satisfactory completion of an oral evaluation
- Documented evaluation of equivalencies
- Completion of approved training courses that confirm attainment of specific knowledge requirements

A designated QO must also verify successful completion of the MPAs in this FAQs. The QO must verify that the evaluation criteria, including any organization specific requirements, are satisfactorily met during observation of the MPA and/or review of the results of the MPA.

Satisfactory attainment of the performance competency knowledge requirements and MPAs contained in this FAQs must be documented using the WSH FAQs qualification card in the electronic Technical Qualification Program (eTQP) at <https://etqp.ntc.doe.gov>.

After verification of attainment of all the performance competency knowledge requirements and the MPAs in this FAQs, a WSH candidate must satisfactorily complete the final qualification activity requirements identified in DOE O 426.1 and any other applicable organization-specific requirements before being designated as a qualified WSH.

INITIAL QUALIFICATION AND CONTINUING TRAINING

Appendix A, *Initial Qualification Training Recommendations*, includes a list of National Training Center (NTC) and other training courses that support attainment of the required performance competencies for WSH and specialist participants.

Appendix B, *Continuing Training Recommendations*, states that WSH personnel shall participate in a continuing training and qualification program.

DUTIES AND RESPONSIBILITIES

Position-specific duties and responsibilities for WSH professional are contained in organization-specific qualification standards and position descriptions.

The following are typical duties and responsibilities expected of the WSH professional:

- Analyze documents related to worker safety and health.
- Monitor day-to-day program activities to support periodic contractor performance evaluations.
- Conduct oversight activities to evaluate contractor compliance to worker safety requirements and regulations.
- Provide subject-matter expertise as requested.

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Technical support duties are dependent on an individual's level of subject-matter expertise and the needs of the organization and will not be addressed by any performance competencies in this FAQS. Position-specific duties and responsibilities for the WSH professional should be included in other qualification standards and position descriptions.

BACKGROUND AND EXPERIENCE

The knowledge requirements and associated MPAs identified in the FAQS were developed based on the assumption that participants have the preferred education and experience levels identified below. Based on input from the supervisor and QO, personnel assigned to complete this FAQS may need additional developmental assignments and supporting training to satisfactorily complete this FAQS.

The preferred education and experience for Worker Safety and Health professional are as follows:

1. **Education:** Bachelor's degree in engineering or a science-related field or meeting the alternative requirements specified for engineers or scientists in the Office of Personnel Management's general schedule qualification standards. An advanced technical degree and/or a professional or industry certification, such as Certified Industrial Hygienist (CIH), Certified Safety Professional (CSP), Professional Engineer (PE), or others as applicable, are considered to be an advantage.

And/or

2. **Experience:** Industrial, military, Federal, state, or another directly related background that has provided specialized experience in worker safety and health. Specialized experience can be demonstrated through possession of the competencies outlined in this standard.

REQUIRED PERFORMANCE COMPETENCIES

The performance competencies contained in this FAQS include knowledge requirements that are in addition to, and distinct from, the knowledge requirements contained in the General Technical Base (GTB) Part A and B Qualification Standard (QS). All WSH personnel completing initial qualifications must satisfy the knowledge requirements of the GTB Part A QS and the knowledge requirements and MPAs in the GTB Part B QS prior to (or in parallel with) attaining the knowledge requirements for the performance competencies in this FAQS. Each performance competency defines the expected level of knowledge and performance an individual must attain to meet the intent of this standard. Each performance competency is further described by knowledge requirements and, if necessary, MPAs that describe the task(s) that must be demonstrated to meet the intent of the related performance competency.

Note 1: When regulations, DOE directives, or other industry standards are referenced in this FAQS, the most recent revision should be used. However, WSH FAQS participants and QOs should also refer to the versions of requirements included in the local contract during the attainment and verification of related knowledge requirements. Any applicable knowledge

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requirements in predecessor documents that are not included in this FAQS should be included in the organization-specific QS or continuing training program.

Note 2: If specific evaluation criteria are not identified for any of the MPAs in this FAQS, the following generic evaluation criteria should be used together with any local expectations to verify acceptable completion of the particular MPA.

Generic MPA Evaluation Criteria

- Identify expectations (i.e., criteria) for the specific activity.
- Compare results to expectations (criteria) and document conclusions.
- Document the basis for any identified issues or recommendations.
- Discuss, if applicable, how you would communicate results to appropriate Federal and/or contractor personnel.

Laws and Regulations

1. A Worker Safety and Health (WSH) professional shall demonstrate knowledge of the requirements for implementing the WSH program per 10 Code of Federal Regulations (CFR) 851, *Worker Safety and Health Program*, and applicable DOE directives.

Knowledge Requirements:

- A. Describe the purpose, scope, and applicability of the following in your role as a WSH Professional:
 1. Describe effective integration of safety management into all facets of work planning and execution per DOE O 450.2 current version.
 2. Describe (compare/contrast) a graded approach to WSH programs at all tiers [Management & Operations (M&O,) prime, sub, etc.].
- B. Describe contractor assurance system (CAS) requirements per DOE O 226 related to WSH including:
 1. Rigorous, risk-informed, and credible self-assessment and feedback and improvement activities (for example, accident investigation, issues management, corrective actions, lessons learned, self-assessments, performance metrics, etc.).
 2. Discuss non-compliance tracking system (NTS) reporting.
 3. Discuss the contractor's program for WSH data reporting through DOE O 231.1, Environment, Safety and Health Reporting, and DOE O 232.2, Occurrence Reporting and Reporting of Operations Information.
- C. Explain how your site's Federal Employee Occupational Safety and Health (FEOSH) program utilizes aspects of the contractor's WSH program.
- D. Demonstrate knowledge of the purpose and scope of the following 29CFR1910, 29CFR1926, National Fire Protection Association (NFPA) 70, and NFPA 70E.

Program Approval

2. A WSH professional shall evaluate and recommend approval of required WSH program documents per 10 CFR 851, *Worker Safety and Health Program*.

Knowledge Requirements:

- A. Demonstrate crosswalk methodology for reviewing associated procedures in the WSH program functional areas.
- B. Review and discuss previous contractor submittals and field/site approval.

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Mandatory Performance Activity (MPA)

MPA 2.1: Review and recommend approval or disapproval of current contractor WSH program documents and make recommendation(s) to the head of field/site element.

Implementation of WSH Program Requirements

3. A WSH professional shall evaluate the site contractor's implementation of WSH 10 CFR 851, Subpart C, program requirements by conducting and analyzing results from oversight activities.

Knowledge Requirements:

- A. Evaluate the site approved WSH program's implementation of hazard identification and assessment (851.21).
- B. Evaluate the site approved WSH program's implementation of hazard prevention and abatement (851.22).
- C. Review and discuss a sampling of contractor WSH assessments, including identified issues.
- D. Identify common WSH program performance indicators, including the Occurrence Reporting and Processing System (ORPS) and Computerized Accident Incident Reporting System (CAIRS).
- E. Describe a contractor's exposure assessment process.
- F. Describe the stop work authority procedure for your site.
- G. Review and discuss the contractor's recordkeeping and trend analysis for injury and illness case rates.
- H. Describe the event investigation/critique process at your site.

Mandatory Performance Activity (MPA)

MPA 3.1: Participate in a documented assessment of a minimum of three applicable items from 10 CFR 851, *Worker Safety and Health Programs*, Appendix A, WSH Functional Areas.

- Construction Safety
- Fire Protection
- Explosives Safety
- Pressure Safety
- Firearms Safety
- Industrial Hygiene
- Biological Safety
- Occupational Medicine
- Motor Vehicle Safety
- Electrical Safety
- Nano Safety (DOE O 456.1A)
- Workplace Violence

Mandatory Performance Activity (MPA)

MPA 3.2: Attend at least three site-specific training courses (classroom, online, or field/site) related to the WSH program to ensure compliance with 851.25.

MPA 3.3: Assess work planning and control documentation for one work package to ensure compliance with 851.21 and .22.

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MPA 3.4: Observe a work activity from start to finish and evaluate implementation of the five core functions of the Integrated Safety Management System (ISMS) process.

MPA 3.5: Observe one contractor's assessment and provide feedback through a documented operational awareness activity.

MPA 3.6: Participate in a contractor safety committee meeting at your site.

Contract Management

4. A WSH professional shall evaluate the performance of the WSH program.

Knowledge Requirements:

- A. Evaluate and discuss the contractor assurance system regarding compliance and performance with 10 CFR 851, *Worker Safety and Health Program*, requirements.
 - 1. Review one site's collective set of CAS performance measures, including leading/lagging indicators.
 - 2. Discuss favorable/unfavorable trends for the most recent WSH performance reporting period.

Mandatory Performance Activity (MPA)

MPA 4.1: Participate in a scheduled Federal/contractor WSH program performance review. Focus areas should include the following:

- A. Utilizing trend analysis and indicator data, evaluate the effectiveness of the contractor's WSH program in reducing and preventing occupational injuries, illnesses, and accidental losses (e.g., Safety Performance Objectives, Measures, and Commitments [SPOMCs]; Total Recordable Case Rate [TRCR], days away, restricted, or transferred [DART]; medical surveillance data; CAS; etc.).
- B. Review, observe, and describe the performance of the hazardous energy control/lockout/tagout (LOTO) program.
- C. Review other focus areas as determined by site (for example, recent unfavorable performance measures, trending non-ORPS events, motor vehicle safety, construction sites, near misses, etc.).

APPENDIX A

INITIAL QUALIFICATION TRAINING RECOMMENDATIONS

Technical education and/or training may include courses/training provided by the Department of Energy, other government agencies, outside vendors, or local educational institutions. Training topics should also address identified weaknesses in the knowledge and/or skills of the individual and current technical issues related to the associated FAQs. **NOTE:** The courses listed below are recommendations and are designed to help participants gain knowledge in the related competency areas but are not intended to replace a competency checkout.

Table 1—Initial Qualification Training Recommendations	
Laws and Regulations	SAF-101DE, General Technical Base (GTB 3.0) , NTC, Learning Nucleus
Implementation of Key Elements	Any official OSHA 300 10- or 30-hour course Any official CPR, AED, or first aid course Site-specific training related to WSH program areas Nano Particles, American Chemical Society online and webinars, How to Assess and Manage Nano and Advanced Material Risks PDC Recording Biological Safety course, University of Washington Environmental Health and Safety OSHA Training Institute or Regional Training Centers sponsored by OSHA /National Institute for Occupational Safety & Health (NIOSH) Introduction to Industrial Hygiene, Learning Nucleus DOE-110DE, Oversight Fundamentals, NTC, Learning Nucleus DOE-200DE, Assessment Fundamentals, NTC, Learning Nucleus Laboratory Safety, Learning Nucleus
Contract Management	Any official OSHA 300 10- or 30-hour course DOE-120DE, Oversight & Implementation, NTC, Learning Nucleus EIP-120DE, Accident Investigation Overview, NTC, Learning Nucleus FOO-240DE, Work Planning and Control, NTC, Learning Nucleus

APPENDIX B

CONTINUING TRAINING RECOMMENDATIONS

Worker Safety and Health (WSH) professionals shall participate in a continuing training and qualification program that includes the following elements:

1. Continuing technical education and/or training covering topics directly related to the worker safety and health program as determined to be appropriate by management. This may include courses/training provided by the Department of Energy, 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.]
 - a. Certifications may include Certified Industrial Hygienist, Certified Safety Professional, or Certified Industrial Hygiene Professional.
2. Specific continuing training requirements shall be documented in individual development plans.

Recommended: Focus on specific WSH functional areas, contractor/site training, assessments, audits, professional organization development conferences and courses, and pursue and maintain professional certification.

CONCLUDING MATERIAL

Review Activity:

EM
NA
NE
SC
EA

Preparing Activity:

EA-50

Field and Operations Offices:

CBFO
CH
ID
OH
OR
ORP
RL
SR

Field or Site Offices:

Argonne Site Office
Brookhaven Site Office
Fermi Site Office
Kansas City Field Office
Livermore Field Office
Los Alamos Field Office
Nevada Field Office
Princeton Area Office
Savannah River Field Office
Sandia Field Office