



# DOE's Process for Qualification of its Federal Workforce

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# The DOE Experience

- The experiences at the Department of Energy (DOE), its National Training Center (NTC) and its Carlsbad Field Office (CBFO) can provide a framework used to develop a program for training and qualification for federal workers overseeing work of contractors in a nuclear facility where operations impact the safety of the workforce, public and environment.

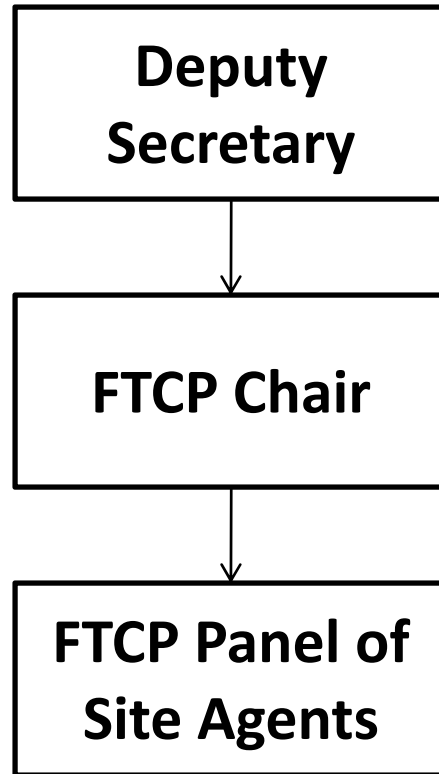
# History of the DOE's Technical Qualification Program (TQP)

- 1993
  - Defense Nuclear Facilities Safety board (DNFSB) identifies need to improve the technical capability of federal employees in defense nuclear facilities.
  - DOE establishes *Federal Technical Capability Manual & Guide for Recruiting, Hiring, and Retaining*
- 1997-1998
  - DNFSB requested revised plan to address actions that had not been achieved
  - DOE charters a Federal Technical Capability Panel to oversee and resolve issues
- 2004-2009
  - In aftermath of NASA's Columbia Accident investigation, DNFSB identifies continued concerns for safety in Defense Nuclear Facilities
  - DOE establishes Central Technical Authority and Integrating Safety Management System into Nuclear Operations

# Federal Technical Capabilities Program (FTCP) Mission

- FTCP focuses on the Department of Energy's strong commitment to developing and maintaining a technically competent workforce to accomplish its missions in a safe and efficient manner.
- The FTCP provides for the recruitment, deployment, development, and retention of Federal personnel with the demonstrated technical capability to safely accomplish the Department's mission and responsibilities.

# DOE FTCP Organization



# Guiding Principles of The Federal Technical Capabilities Panel (FTCP)

- Federal personnel possess the experience, knowledge, skills, and abilities that are necessary to discharge their safety responsibilities;
- Line managers are accountable and have the responsibility, authority, and flexibility to achieve and maintain technical excellence;
- Supporting organizations (personnel, training, contracts, finance, etc.) recognize line managers as customers and effectively support them in achieving and maintaining technical capabilities;
- An integrated corporate approach is required to assure that necessary technical capabilities and resources are available to meet the overall needs of the Department's defense nuclear facility missions.

# Functional Area Qualification Standards (FAQS)

- Developed from “standard” job task analysis
- Competency based on Knowledge, Skills and Abilities (KSA)
- Used “as is” without modification by sites
- Transportable between sites
- Supplemented by position specific and site specific standards

# DOE Functional Area Qualification Standards (FAQS)

- Aviation Manager
- Chemical Processing
- Construction Management
- Deactivation and Decommissioning
- Environmental Compliance
- Facility Maintenance Management
- Fire Protection
- Industrial Hygiene
- NNSA Package Certification Engineer
- Nuclear Explosive Safety Study
- Occupational Safety
- Radiation Protection
- Safeguards and Security GTB
- Senior Technical Safety Manager
- Technical Training
- Waste Management
- Aviation Safety Officer
- Civil/Structural Engineering
- Criticality Safety
- Emergency Management
- Environmental Restoration
- Facility Representative
- General Technical Base (GTB)
- Instrumentation and Control
- Mechanical Systems
- Nuclear Safety Specialist
- Quality Assurance
- Safeguards and Security
- Safety Software Quality Assurance
- Technical Program Manager
- Transportation & Traffic Management
- Weapons Quality Assurance



# TQP Standards Assignment

- General Technical Base
- DOE FAQs (one or more)
- Position Specific Standard
- Site Specific Standards

# FTCP Qualification

- Evaluation performed by “Qualifying Official”
- Uses Functional Area Qualification Standards for Competencies based on Knowledge, Skills, and Abilities (KSA)
- Qualification based on Assessment and/or Demonstration of Competencies by Written Examination, Oral Boards, and/or Facility Walk-downs

# DOE Site Program Accreditation

- Based on Commonly Established Criteria
  - Executive Commitment and line Mgt Ownership
  - Recruiting
  - Staffing
  - Development
  - Retaining
  - Transportability
  - Measureable Results

# National Training Processes

- National Training Needs Assessment
- Gap Analysis on Course Offerings
- Course Development
- Course Offerings
- Course Assessment and Feedback

# National Training Center

- Relies on the FAQs for job task analysis
- Bases course development on a Systematic Approach to training (SAT)
  - Analysis, Design, Development, Implementation, and Evaluation (ADDIE)
- Supports the FTCP training needs

# TQP Continuous Learning Process

- Body of Knowledge (BOK)
- Site Learning Matrix
- Training Matrix
- Progress Tracker

# Lessons Learned

- Processes to obtain the required competencies are established
- Processes for conducting candidate qualification and requalification evaluations as necessary are clear and consistent
- Continuing development programs are established
- Resources (time, funding) needs to be provided for qualification
- Continuous monitoring of progress is required
- The time limit needs to be realistic and based on individual experience
- Compensatory measures need to be in place until qualification is achieved

# Summary

- The DOE has a Framework by which it trains and qualifies its technical workforce.
- DOE's Framework can serve as a roadmap for others to ensure training and qualification of their workforce.