

Nuclear Facility Compliance

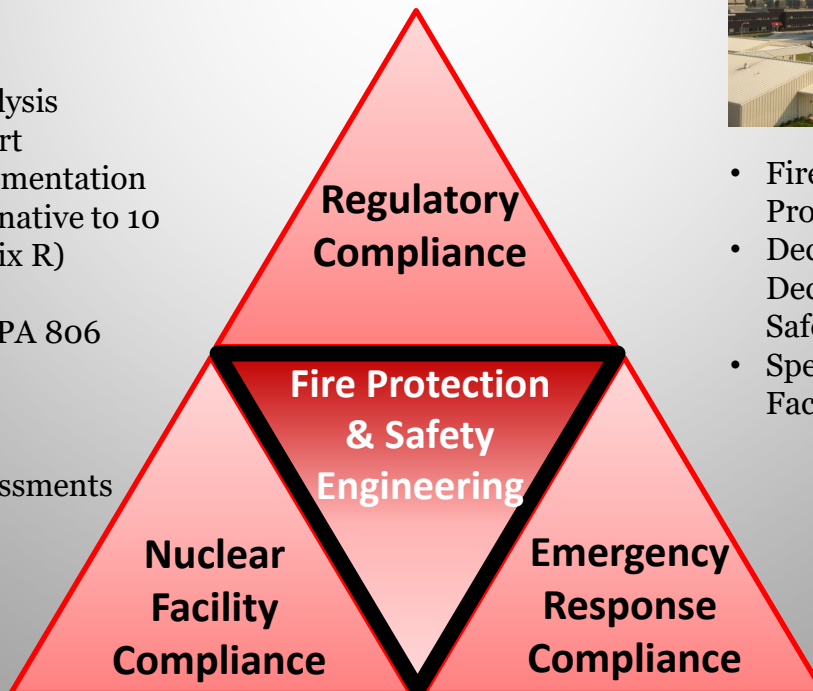
TetraTek, Inc. has in-depth experience with Nuclear Facility Compliance support services throughout the DOE Complex, Nuclear Power and Enrichment Fuel Cycle industries.

With hands-on experience and our policy-making process in the development of National Consensus Codes and Standards (Technical Committee Members on the NFPA Nuclear Facility Codes), TetraTek, Inc. has the expertise to implement and manage compliant Nuclear Fire Protection Programs and Projects.

To include the following:

- U.S. Department of Energy (DOE)
- U.S. Department of Defense (DOD)
- U.S. Nuclear Regulatory Commission (NRC)
- Nuclear Power Plants
- Enrichment Facilities
- Processing/Manufacturing

- Fire Hazard Analysis
- Licensing Support
- NFPA 801 Implementation
- NFPA 805 (alternative to 10 CFR 50, Appendix R) Implementation
- NFPA 804 & NFPA 806 Compliance
- Fire Protection Engineering Analyses & Assessments
- Code Analysis



- Fire Protection Programs
- Decontamination & Decommissioning Fire Safety (NFPA 241)
- Special Nuclear Hazards Facilities

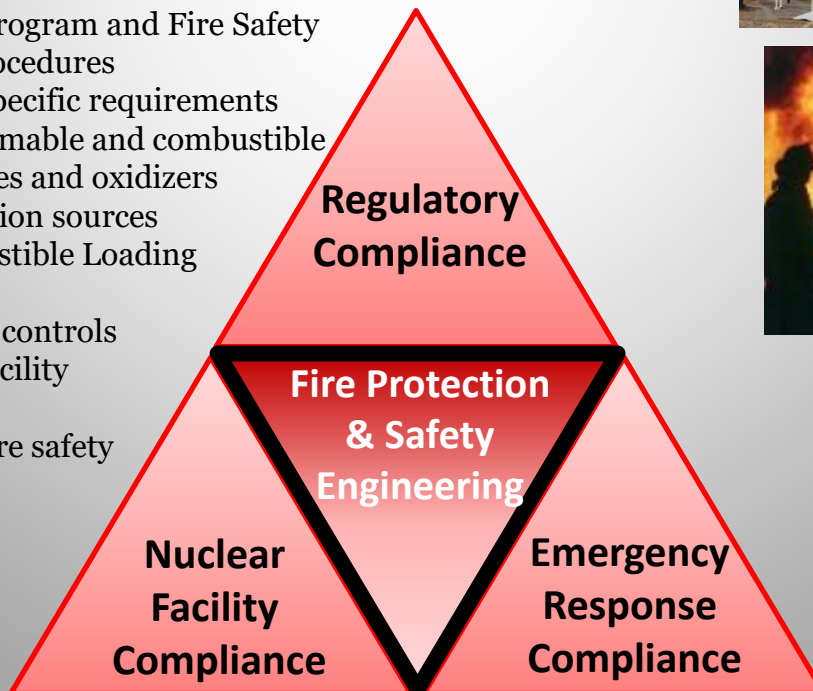


Nuclear Facility Compliance

Fire Protection Programs

TetraTek, Inc. has in-depth experience evaluating, developing, implementing and managing (if applicable) comprehensive Fire Protection Programs and/or evaluating, revising and updating existing Fire Protection Programs. A compliant Fire Protection Program will meet the fire safety policy objectives of the Organization, Regulator and/or Authority Having Jurisdiction. As NFPA Technical Committee Members, not only does TetraTek, Inc. interpret National Consensus Codes and Standards, we also develop them through the policy making process (we write the codes). The industry standard Fire Protection Program includes:

- Overall Directive and Management Policies
- Conformance to National Consensus Codes and Standards & Regulatory Requirements
- Staff organization, training and responsibilities
- Fire Protection Engineering Analyses and Assessments, including Fire Hazards Analysis
- Design review program
- Inspection, Testing & Maintenance requirements for fire protection systems and equipment including systems engineering requirements
- Impairment Process and Compensatory Measures
- Emergency Response Compliance
- Pre-Incident Plans
- Fire Prevention Program and Fire Safety Implementing Procedures
 - Organization specific requirements
 - Control of flammable and combustible liquids and gases and oxidizers
 - Control of ignition sources
 - Facility Combustible Loading (CL) Program
 - Administrative controls
 - Documented facility inspections
 - Construction fire safety
- Water supply requirements
- Site specific requirements



Nuclear Facility Compliance **Fire Protection Licensing Support &** **NFPA Implementation**

TetraTek, Inc. has in-depth experience supporting licensing and regulatory compliance activities and implementing NFPA Nuclear Facility Codes in the areas of fire protection and emergency management for nuclear facilities. Through the licensing process, the U.S. Nuclear Regulatory Commission (NRC) authorizes an applicant to conduct activities in support of their licensing. TetraTek, Inc. can provide support pertaining to fire protection and emergency management of the following:

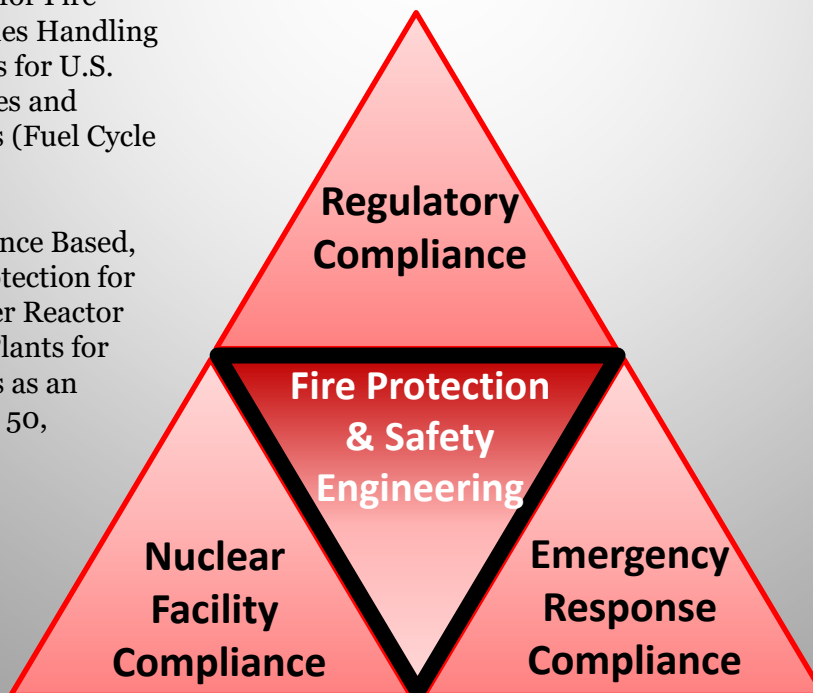
- Construct, operate, and decommission commercial reactors and fuel cycle facilities
- Possess, use, process, export and import nuclear materials and waste, and handle certain aspects of their transportation
- Site, design, construct, operate, and close waste disposal sites



As NFPA Technical Committee Members on the Nuclear Facility Codes, TetraTek, Inc. has the expertise to implement NFPA 801, 804, 805 & 806 Codes and Standards within the nuclear industry.

NFPA 801, Standard for Fire Protection for Facilities Handling Radioactive Materials for U.S. DOE Nuclear Facilities and Enrichment Facilities (Fuel Cycle Facilities)

NFPA 805, Performance Based, Standard for Fire Protection for Advanced Light Water Reactor Electric Generating Plants for Nuclear Power Plants as an alternative to 10 CFR 50, Appendix R



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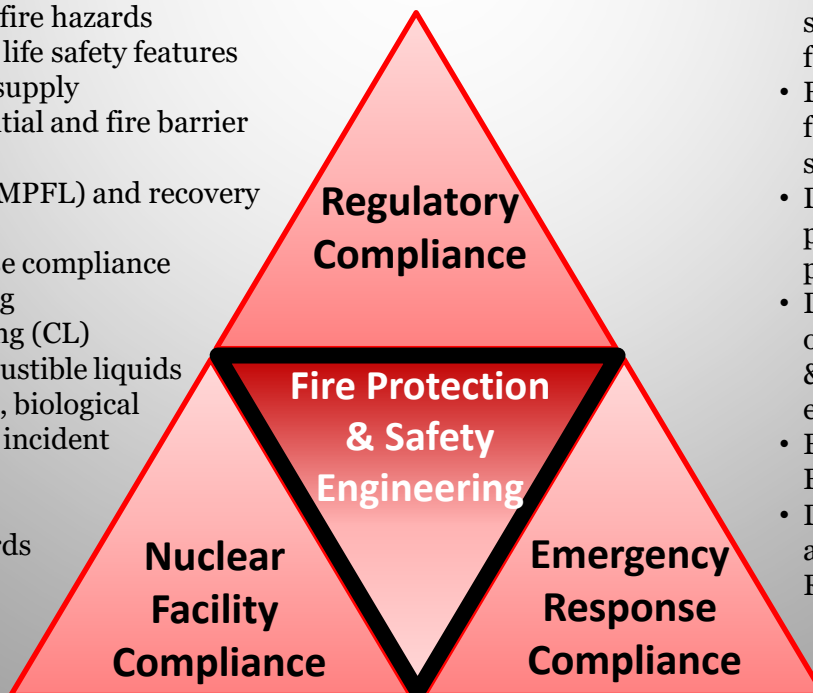
Fire Hazards Analysis

TetraTek, Inc. has in-depth experience performing Fire Hazards Analysis (FHA) on nuclear facilities.

The purpose of a FHA is to comprehensively and qualitatively assess the risk from fire within individual fire areas in a facility to ascertain whether the Organization, Regulator and/or the Authority Having Jurisdiction fire safety objectives are met. This includes an assessment of the risk from fire and related hazards in relation to existing or proposed fire protection and life safety features to ensure that the facility can be safely controlled and stabilized during and after a fire. The level of detail necessary for an acceptable FHA is directly related to the complexity of the facility and the potential risk to facility occupants, public and the potential impact to the environment.

The general approach taken to complete this analysis involves the identification of the fire risks associated with existing or proposed operations and the fire protection and life safety features required to mitigate the adverse consequences from fire and smoke. Major elements analyzed include:

- Conformance with National Consensus Codes and Standards and Regulatory Requirements
- Description of construction; operations and processes; and fire hazards
- Fire protection and life safety features
- Adequacy of water supply
- Exposure fire potential and fire barrier integrity
- Damage potential (MPFL) and recovery of operations
- Emergency response compliance
- Emergency planning
- Combustible Loading (CL)
- Flammable & combustible liquids
- Potential for a toxic, biological and/or radiological incident due to a fire
- Natural hazards
- Security & Safeguards
- Site specific requirements
- ITM records of fire protection and life safety features
- Effect of significant fire safety deficiencies on fire risk
- Environmental impacts from a fire including suppression run-off
- Description of vital programs and high value property
- Description & protection of essential safety class & critical process equipment
- Exemption / Equivalency Disposition
- Deficiency Identification and Noncompliance Resolution



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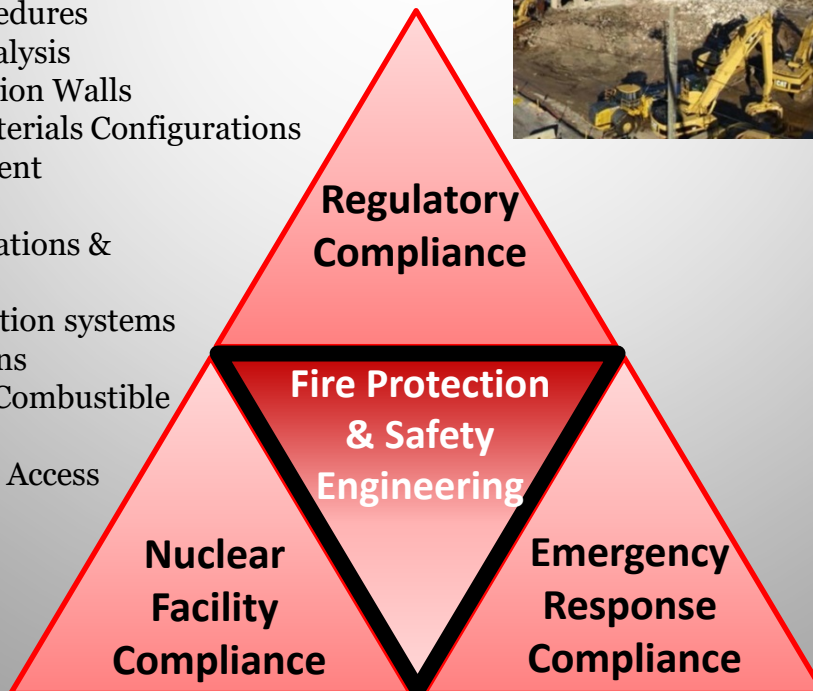
Decontamination & Decommissioning

Fire Safety (NFPA 241)

TetraTek, Inc. has in-depth experience providing Decontamination and Decommissioning (D&D) Fire Safety support services across the industry utilizing NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations. TetraTek, Inc. personnel are Technical Committee Members on NFPA 241. This expertise provides the client safeguards for construction, D&D and alteration operations in order to provide reasonable safety, while preventing and minimizing injuries and loss of life; environmental impacts and property from fire and smoke. Fire Safety elements included:

- D&D Fire Safety (NFPA 241)
- Life Safety (NFPA 101 & 101A)
- Adequate Water Supply
- Safeguarding Demolition Operations
- Safeguarding Construction & Alteration Operations
- Safeguarding Underground Operations
- Safeguarding Roofing Operations
- Fire Protection Systems & Extinguishing Equipment
- Fire Safety Program
- Hot Work Operations
- Emergency Procedures
- Fire Hazards Analysis
- Building Separation Walls
- Combustible Materials Configurations
- Heating Equipment
- Utilities
- Hazardous Operations & Procedures
- Fire Communication systems
- Pre-Incident Plans
- Flammable and Combustible Liquids
- Fire Department Access

- U.S. Department of Energy (DOE)
- U.S. Department of Defense (DOD)
- U.S. Nuclear Regulatory Commission (NRC)
- Nuclear Power Plants
- Enrichment Facilities



Nuclear Facility Compliance

Code Analysis

As former regulators, TetraTek, Inc. industry consultants have in-depth experience performing Code Analyses for Facilities, Fire Protection Programs and Processes throughout the industry determining conformance to National Consensus Codes and Standards and Regulatory Requirements. As NFPA Technical Committee Members, not only does TetraTek, Inc. interpret National Consensus Codes and Standards, we also develop them through the policy making process (we write the codes). Additionally, TetraTek, Inc. staff have the knowledge and are successful utilizing alternative approaches and innovative solutions (Code Equivalency Process) to meet the regulatory intent. This Code Equivalency Process is then formulated to meet the objectives of the Organization, Regulator and/or Authority Having Jurisdiction.

As NFPA Technical Committee Members on several pertinent National Consensus Codes and Standards, TetraTek, Inc. interpretations are well received by Organizations, Regulators and Authorities Having Jurisdiction. TetraTek, Inc. personnel are NFPA Technical Committee Members on the following NFPA National Consensus Codes and Standards:

NFPA 801, Standard for Fire Protection for Facilities Handling Radioactive Materials for U.S. DOE Nuclear Facilities and Enrichment Facilities (Fuel Cycle Facilities)

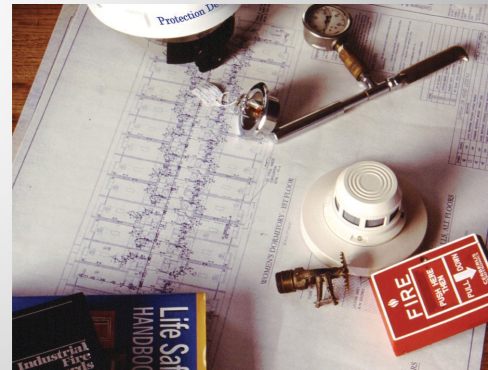
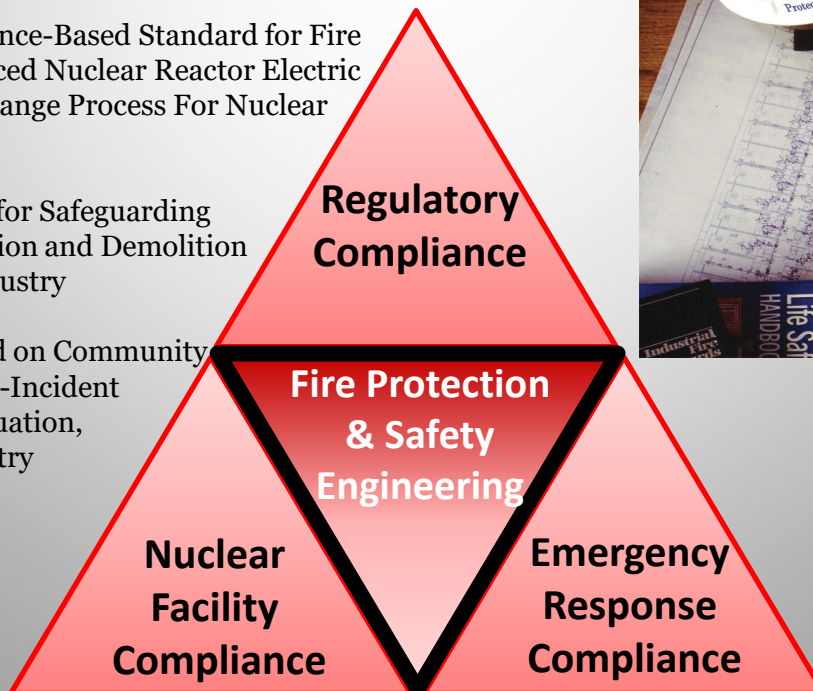
NFPA 805, Performance Based, Standard for Fire Protection for Advanced Light Water Reactor Electric Generating Plants for Nuclear Power Plants as an alternative to 10 CFR 50, Appendix R

NFPA 804, Standard for Fire Protection for Advanced Light Water Reactor Electric Generating Plants for Nuclear Power Plants

NFPA 806, Performance-Based Standard for Fire Protection for Advanced Nuclear Reactor Electric Generating Plants Change Process For Nuclear Power Plants

NFPA 241, Standard for Safeguarding Construction, Alteration and Demolition Operations for all industry

NFPA 1660, Standard on Community Risk Assessment, Pre-Incident Planning, Mass Evacuation, Sheltering and Re-entry Programs for all industry



Nuclear Facility Compliance

Deficiency Identification &

Noncompliance Resolution

TetraTek, Inc. has expertise providing Deficiency Identification and Noncompliance Resolution on facilities and programmatic related issues ensuring the life safety of personnel and that the protection features of the facility adhere to requirements of National Consensus Codes and Standards.

The following proven TetraTek, Inc. methodology will ensure each and every issue entered into the Organizations corrective action system is effectively documented and can be effectively managed through the following:

STEP 1: Identification and/or validation of issue/noncompliance (field walkdowns, research and interviews)

STEP 2: Prioritize and group into disciplines

STEP 3: Effective illustration of issue/noncompliance and coordination with facility managers, maintenance contractors and corrective action coordinators, etc.

STEP 4: Documented evidence file and code or record

STEP 5: Status resolution

In summary, TetraTek, Inc. can provide Deficiency Identification and Noncompliance Resolution with:

- Complete issue management and coordination (identification through resolution status)
- Equivalency and exemption request support
- Issue evidence file (effective audit trail that provides sufficient closure resolution)
- Proven methodology providing cost effective solutions to corrective action backlogs

