

EFCOG Best Practice # 221

Facility: DOE Complex

Best Practice Title: Assigning National Electrical Code (NFPA 70) and Electrical Safety in the Workplace (NFPA 70E) Authority Having Jurisdiction (AHJ) Responsibilities

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Brief Description of Best Practice: Identifies the routine activities assigned to the contractor authority having jurisdiction (C-AHJ) by the DOE head of the field element and provides a template letter to facilitate the assignment of the C-AHJ.

Why the best practice was used: To eliminate inconsistency with the assignment of AHJ routine activities.

What are the benefits of the best practice: To promote consistency of the AHJ assignment and provide clarity of the routine activities.

What problems/issues were associated with the best practice: N/A (New best practice.)

How the success of the Best Practice was measured: N/A (New best practice.)

Description of process experience using the Best Practice: N/A (New best practice.)

Industry terminology used in this BP (e.g. interpretation, waiver, equivalent objective, alternative method, approve) is used in the NFPA 70 and NFPA 70E standards, and is necessary to carry out the routine activities assigned to the C-AHJ and not intended to serve as inherently governmental functions.

EFCOG Best Practice # 220

Assigning National Electrical Code (NFPA 70) and Electrical Safety in the Workplace (NFPA 70E) Authority Having Jurisdiction (AHJ) Responsibilities

The Federal Activities Inventory Reform (FAIR) Act of 1998 establishes that Federal agencies may not confer authority to perform "inherently governmental functions" to contractors. The Congressional Research Service's document "Definitions of 'Inherently Governmental Function' in the Federal Procurement Law and Guidance" provides definitions and explanations of what actions are considered inherently governmental functions. The AHJ functions in NFPA-70 and NFPA-70E are inherently governmental functions. Therefore, the use of the term "delegate" in the context of conferring AHJ responsibilities to contractors, is inappropriate because it is an inherently governmental function that may not be conferred to the contractor. The purpose of this best practice is to provide general background information, consistent terminology, common routine tasks, and a common template for each contractor to utilize when working with their DOE Field Office in the pursuit of AHJ assignment.

It is appropriate, however, for DOE to assign AHJ related operational responsibilities to contractors. A good example of this is requirement 4.d in DOE Order 420.1C 12-4-2012;

DOE Elements must: *Document any operational responsibilities that are assigned to the contractor regarding the authority having jurisdiction (AHJ) for matters involving fire protection as defined by the National Fire Protection Association (NFPA) codes;*

DOE Field Element Managers should designate responsibility for administering and enforcing the requirements of the National Electrical Code (NFPA 70 2017) and Electrical Safety in the Workplace (NFPA 70E 2015) to the contractor. This designation should not be combined with any Fire Protection Program designations/delegations/assignments.

Background Information

Title 10 CFR 851 *Worker Safety and Health Program at § 851.23 Safety and health standards* incorporates by reference NFPA 70 2017 (*National Electrical Code*) and NFPA 70E 2015 (*Standard for Electrical Safety in the Workplace*).

DOE O 420.1C, *Facility Safety*, establishes facility and programmatic safety requirements for nuclear safety design criteria, fire protection, criticality safety, natural phenomena hazards (NPH) mitigation, and, the cognizant system engineer (CSE) program. It does not include electrical safety.

DOE-STD-1066-2016, *Fire Protection*, facilitates implementation of O 420.1C, *Facility Safety*, for fire protection programs, and addresses special or unique fire protection issues at DOE facilities that are not comprehensively or adequately addressed in national consensus standards or other design criteria. DOE-STD-1066-2016 also establishes a process for developing and requesting AHJ approval of fire

protection equivalencies and exemptions to fire protection requirements. These processes are not applicable to *Electrical Safety* and the implementation of NFPA 70 or 70E.

NFPA 70 2017, Informative Annex H, *Administration and Enforcement*, Article 80.1 provides its scope which includes but is not limited to; the inspection, investigation, design review, alterations, modifications, construction and maintenance, and regulation of electrical system installations. NFPA 70 intends that this information is advisory only unless specifically adopted by a governmental or other entity charged with enforcing electrical installation requirements. NFPA 70 is specifically required by DOE in 10 CFR 851 so informative Annex H is required for DOE contractors.

Annex H allows the authority having jurisdiction (e.g. the DOE Field Element Manager) to designate individuals responsible for administering and enforcing the requirements of the Code (NFPA 70).

Best Practice Terminology and Assigned Responsibilities

DOE Authority Having Jurisdiction (DOE-AHJ). The DOE, Head of Field Element is the DOE-AHJ and is ultimately responsible for enforcing requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure, but responsibility can be delegated to another Federal official and routine activities can be assigned to a contractor authority having jurisdiction (AHJ).

Contractor Authority Having Jurisdiction (C-AHJ). A Contractor organization, office, or individual assigned routine activities by the DOE Head of Field Element. Routine activities may include but are not limited to assuring compliance with technical requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure. The C-AHJ may further assign this designation of authority.

Electrical Safety Authority (ESA). As permitted by NFPA 70E (2018 version) Article 350; *Each laboratory or R&D system application shall be permitted to assign an ESA to ensure the use of appropriate electrical safety-related work practices and controls. The ESA shall be permitted to be an electrical safety committee, engineer, or equivalent qualified individual. The ESA shall be permitted to designate authority to an individual or organization within their control.*

(A) Responsibility. *The ESA shall act in a manner similar to an authority having jurisdiction for R&D electrical systems and electrical safe work practices.*

(B) Qualifications. *The ESA shall be competent in the following:*

- (1) The requirements of NFPA 70E*
- (2) Electrical system requirements applicable to the R&D laboratories*

Letter of Assignment. Letter from DOE Head of Field Element that documents all operational responsibilities designated or assigned to the contractor regarding the authority having jurisdiction (AHJ) for matters as defined by the National Fire Protection Association (NFPA) codes and standards.

**AHJ Routine activities include but
are not limited to the following:**

The C-AHJ assigned by the governing authority (DOE) should administer these codes and standards as follows:

(1) The authority having jurisdiction shall be permitted to render interpretations of this Code in order to provide clarification to its requirements, as permitted by NFPA 70 90.4;

90.4, Enforcement, This Code is intended to be suitable for mandatory application by governmental bodies that exercise legal jurisdiction over electrical installations. The authority having jurisdiction for enforcement of the Code has the responsibility for making interpretations of the rules, for deciding on the approval of equipment and materials, and for granting the special permission contemplated in a number of the rules.

By special permission, the authority having jurisdiction may waive specific requirements in this Code or permit alternative methods where it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety.

(2) When the use of any electrical equipment or its installations is found to be dangerous to human life or property, the authority having jurisdiction shall be empowered to have the premises disconnected from its source of electric supply.

(3) The authority having jurisdiction shall be permitted to delegate to other qualified individuals such powers as necessary for the proper administration and enforcement of these codes and standards.

(4) The authority having jurisdiction shall be authorized to inspect, at all reasonable times, any building or premises for dangerous or hazardous conditions or equipment as set forth in these codes and standards to enter and examine any building, structure, or premises for the purpose of making electrical inspections.

(5) Where the authority having jurisdiction deems that conditions hazardous to life and property exist, he or she shall be permitted to require that such hazardous conditions in violation of these codes and standards be corrected.

(6) The authority having jurisdiction shall be permitted to require plans and specifications to ensure compliance with these codes and standard.

(7) Whenever any installation subject to inspection prior to use is covered or concealed without having first been inspected, the authority having jurisdiction shall be permitted to require that such work be exposed for inspection.

(8) The authority having jurisdiction shall be permitted to order the immediate evacuation of any occupied building deemed unsafe when such building has hazardous conditions that present imminent danger to building occupants.

(9) The authority having jurisdiction shall be permitted to waive specific requirements in these codes and standards or permit alternative methods where it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety. Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency and that the system, method, or device is approved for the intended purpose.

(10) Each application for a waiver of a specific electrical requirement shall be filed with the authority having jurisdiction and shall be accompanied by such evidence, letters, statements, results of tests, or other supporting information as required to justify the request.

NFPA 70E 2015 defines the Authority Having Jurisdiction (AHJ) as an organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure. It also states that in many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction (Article 100). For NFPA 70E the assigned AHJ functions should include interpreting the standard and permitting alternatives where it is assured that these alternatives meet or exceed the standard.

Attachment (1) – Letter of Assignment template for use from DOE Head of Field Element to the Contractor below.



Department of Energy

Date

Site/Laboratory
Director

SUBJECT: Assignment of Routine Electrical Safety Activities for Authority Having Jurisdiction

REFERENCES: 1. National Fire Protection Association (NFPA) 70 2017, *National Electrical Code*
2. National Fire Protection Association (NFPA) 70E 2018, *Electrical Safety in the Workplace*

Dear (Site/Laboratory Director):

The Department of Energy, (field office) Operations Office, assigns the role of Authority Having Jurisdiction (AHJ) for routine activities for electrical safety to (company/site name). You may delegate this authority.

The assigned designee(s) (or committee) shall administer and enforce NFPA 70, *National Electrical Code*, as specified in Annex H *Administration and Enforcement*, and NFPA 70E *Electrical Safety in the Workplace*.

The routine activities assigned to the AHJ include:

- Render interpretations of NFPA 70 2017 in order to provide clarification to its requirements. As permitted by NFPA 70 2017 Article 90.4;
- Have a premises disconnected from its source of electric supply when the use of any electrical equipment or its installations is found to be dangerous to human life or property;
- Delegate to other qualified individuals such powers as necessary for the proper administration and enforcement of NFPA 70 2017;
- Inspect, at all reasonable times, any building or premises for dangerous or hazardous conditions or equipment as set forth in NFPA 70 2017 and enter and examine any building, structure, or premises for the purpose of making electrical inspections;
- Require that hazardous conditions in violation of NFPA 70 2017 be corrected where deemed hazardous to life and property;
- Require that plans and specifications ensure compliance with NFPA 70 2017;
- Require that any installation subject to inspection prior to use that is covered or concealed without having first been inspected be exposed for inspection;
- Order the immediate evacuation of any occupied building deemed unsafe when such building has hazardous conditions that present imminent danger to building occupants;

- Waive specific requirements in NFPA 70 2017 or permit alternative methods where it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety. Require technical documentation be submitted to demonstrate equivalency and that the system, method, or device is approved for the intended purpose;
- Require applications for a waiver of a specific electrical requirement be filed and accompanied by such evidence, letters, statements, results of tests, or other supporting information as required to justify the request;
- Require that unlisted electrical equipment and systems be approved prior to use; and
- Enforce and provide interpretations of NFPA 70E 2018 and permit alternatives where it is assured that these alternatives meet or exceed the standard as it relates to safe work practices.

Your employee(s) assigned as the AHJ must have the requisite education, qualifications, and experience to fulfill this assignment. The documentation and a description as to whom in the organization the assigned authorities will reside, and the qualifications, education, and experience of the individual(s) assigned by (site) to fulfill these functions shall be provided for approval to the Head of Field Element.

DOE (site) retains the right to over-ride decisions, including the interpretation and application of NFPA 70 2017 and NFPA 70E 2018.

The assignment of these activities is effective immediately and supersedes all previous assignments.

If you have any questions, please contact

Sincerely,

Manager/Director