

Administrative Changes to USAFEI 32-1014, *Electrical Skilled Person Recognition On Unsafe Installations In The United Kingdom*

OPR: USAFE/A7PO

References to Defence Estates should be changed to Defence Infrastructure Organisation throughout the publication. 11 Jan 2013

References to 86CTS should be changed to 435CTS in paragraph 2.3.1.3. 11 Jan 2013

17 January 2013

**BY ORDER OF THE COMMANDER,
UNITED STATES AIR FORCES IN
EUROPE (USAFE)**

**UNITED STATES AIR FORCES IN EUROPE
INSTRUCTION 32-1014**



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Civil Engineering

***ELECTRICAL SKILLED PERSON
RECOGNITION ON USAFE INSTALLATIONS
IN THE UNITED KINGDOM***

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Mr. Todd A. Grimes)

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This instruction implements Air Force Policy Directive (AFPD) 32-10, *Installations and Facilities*. This instruction outlines the policy, procedures, responsibilities, and technical standards for the recognition of United States Air Force (USAF) Electrical Skilled Persons at United States Air Force in Europe (USAFE) Installations in the United Kingdom. It applies to base civil engineers and United States (US) supporting agencies conducting electrical work. This instruction highlights training requirements necessary to understand host nation code requirements and electrical safe practices as required by AFI 32-1064, *Electrical Safe Practices*, compliance with the substantive provisions of United Kingdom (UK) law as incorporated by the Ministry of Defence (MOD) Joint Services Publication (JSP) 375 Volume 3, Chapter 3 “*Electricity*”. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located in AF Records Managements System (AFRIMS) at <https://www.my.af.mil/gcss-af61/afirms/afirms/index.cfm>.

1. Background.

1.1. AFI 32-1064, *Electrical Safe Practices*, states “the most important part of a supervisor’s job is to get the job done safely.” Further, “supervisors should train employees to comply with host nation codes.”

1.2. UK law and the Ministry of Defence (MOD) Joint Services Publication (JSP) 375 Volume 3, Chapter 3, “*Electricity*”, require persons conducting electrical installation, testing, and operations on USAF installations in the United Kingdom to be approved as Electrical Skilled Persons.

1.3. UK Law requires “persons to be competent to prevent “**danger and injury.**” Furthermore, it states “no person shall be engaged in any work activity where technical knowledge or experience is necessary to prevent **danger** or, where appropriate, **injury** unless he possesses such knowledge or experience, or is under such degree of supervision as may be appropriate having regard to the nature of the work.”

1.4. JSP 375 requires prospective Electrical Skilled Persons to have an adequate knowledge of Volume 3, Chapter 3, including emergency First Aid and Fire Training. Skilled Persons must also undergo site induction training in accordance with JSP 375, Vol 3, Ch 3, Regulation 2.6.1.

1.5. Following differences identified between UK and US regulations concerning electrical systems and safe practices, a joint USAF and UK Defence Estates working group met to clarify guidance for USAF installations in the UK. This instruction is the result of that consultation.

2. Responsibilities.

2.1. Operations Branch (HQ USAFE/A7PO) will:

2.1.1. Serve as the USAF primary point of contact concerning skilled person training for electrical work in the UK.

2.1.2. Liaise with Defence Estates (DE) and establish USAF Electrical Skilled Person training policy.

2.2. Defence Estates will:

2.2.1. Conduct stewardship responsibilities for US Forces occupied installations in the UK.

2.2.2. Advise Programs Division (HQ USAFE/A7P) on UK legislation and technical guidance concerning electrical training and safety, rules and procedures.

2.2.3. Appoint an Authorizing Engineer responsible for implementing and monitoring compliance with the substantive provisions of UK law and JSP 375 as detailed in this instruction.

2.3. Base Civil Engineer will:

2.3.1. Ensure all USAF personnel required to perform electrical work on the installation have required Electrical Skilled Person Certificates or are directly supervised by an Electrical Skilled Person. USAF personnel include, but are not limited to:

2.3.1.1. Assigned personnel.

2.3.1.2. Temporarily assigned Air Force Reserve and Air National Guard personnel.

2.3.1.2.1. The Base Civil Engineer will determine the Electrical Skilled Person’s requirements based on temporary duty tour length.

2.3.1.3. Units operating under the direct oversight of the Base Civil Engineer including Rapid Engineer Deployable, Heavy Operational Repair Squadron, Engineering (RED HORSE), and 86th Construction Training Squadron (CTS).

2.3.1.3.1. The Base Civil Engineer will determine the Electrical Skilled Person's requirements based on temporary duty tour length.

2.3.2. Allocate funding as required for skilled person training.

2.3.3. Conduct safety audits to ensure requirements are met.

2.3.4. Ensure all training is properly document and certified in the individuals training record.

2.4. The Coordinating Authorized Person (CAP) is an Authorized Person (AP) who coordinates the actions of other AP's and acts as focal point for health and safety information and other guidance. Either Defence Estates or USAF employees may qualify for CAP duties. The CAP will:

2.4.1. Be appointed by the Authorizing Engineer.

2.4.2. Oversee the Skilled Person training and certification program.

2.4.3. Review nominations for Skilled Person Certificates and conduct Appointment Interviews.

2.4.4. Appoint qualified Skilled Persons in accordance with this instruction. If the CAP determines an individual should be approved as a skilled person, the CAP will issue the individual a Skilled Persons Certificate.

2.4.5. Provide in writing reasons for not appointing an individual as a Skilled Person to the Supervisor and Base Civil Engineer.

2.5. Supervisors will:

2.5.1. Oversee training and familiarization for prospective Skilled Persons.

2.5.2. When satisfied the prospective Skilled Persons meets all requirements outlined in this instruction, the supervisor will nominate the prospective Skilled Person in writing to the CAP for certification.

3. Requirements for General and Limited Electrical Skilled Person Certificate.

3.1. General Requirements.

3.1.1. All personnel performing electrical installation, maintenance, and work on or near energized systems or electrical components in the UK must have a General or Limited Skilled Person Certificate or be under the direct supervision of a certified General Electrical Skilled Person.

Note 1: Facility managers who perform basic tasks such as changing lamps, tubes, and starters on fittings under ten feet are exempt from Paragraph **3.1.1.**

Note 2: Electrical personnel who perform ground resistance and lightning protection tests in accordance with AFI 32-1065, *Grounding Systems* are exempt from Paragraph **3.1.1.**

3.1.2. USAF personnel must be 5-Level, Journeymen, or 7-Level, Craftsmen, to obtain a General or Limited Electrical Skilled Person Certificate.

3.1.3. USAF personnel must be a 7-Level, Craftsmen, to become certified in electrical testing and inspection or be nominated by the Base Civil Engineer (BCE) and agreed with by the CAP.

3.1.4. Requirement for General Skilled Person Certificate.

3.1.4.1. Confirm familiarity and practical experience with the various types of electrical installation and electrical equipment that the individual is required to work on or test.

3.1.4.2. Pass Institution of Electrical Engineers (IEE) Wiring Regulations Course (17 Ed).

3.1.4.3. Complete emergency first aid and fire training in accordance with standards allowed by the CAP and approved by the Authorizing Engineer.

3.1.4.4. Complete JSP 375 Volume 3, Chapter 3, Familiarization.

3.1.4.5. Be interviewed/Certified by a Coordinating Authorized Person (CAP).

3.1.5. Requirements for Limited Skilled Person Certificate.

3.1.5.1. Confirm familiarity and practical experience with the various types of electrical installation and electrical equipment that the individual is required to work on or test.

3.1.5.2. Complete in-house UK wiring familiarization training.

3.1.5.3. Complete JSP 375 Volume 3, Chapter 3, Familiarization.

3.1.5.4. Be interviewed/Certified by a Coordinating Authorized Person (CAP).

3.2. Site Familiarization.

3.2.1. Prospective Electrical Skilled Persons shall work under the direct supervision of an appointed Electrical Skilled Person to learn about the base electrical systems.

3.2.2. At a minimum, personnel should understand the types of installation and equipment in the electrical system, preventative maintenance and inspection requirements, be able to identify specific hazards, and have a basic understanding of the roles and responsibilities of all personnel associated with the electrical system.

3.2.3. Direct supervisors (Electrical Skilled Persons) overseeing prospective Skilled Persons will use their judgment as to when personnel have obtained suitable competence for the scope of their responsibilities.

3.3. Required Training for a General Electrical Skilled Persons Certificate.

3.3.1. All 5-Level, Journeymen, and 7-Level, Craftsmen, required to perform electrical work on the installation will complete and pass City & Guilds 2382, IEE Wiring Regulations (BS 7671) 17th Edition as of June 2008 or latest approved course.

3.3.2. As determined by the BCE, any 5-Level, Journeymen, and 7-Level, Craftsmen, required to carry out electrical work in hazardous areas such as Petrol, Oils and

Lubricants (POL) installations, munitions storage areas, aircraft hangars, paint spray areas, and workshops creating hazardous dusts will also complete CompEx, Ex01 to Ex04, *Competence in Explosive Atmospheres* or latest approved course.

3.3.3. In addition to the above courses, those 7-Level Craftsmen or personnel nominated by the BCE and agreed with by the CAP, to carry out electrical inspection and testing will complete and pass City & Guilds 2391, *Inspection, Testing & Certification of Electrical Installations* or latest approved course.

3.3.4. These courses may be updated to reflect changes in British Standard, therefore the CAP should be contacted to identify the most current training requirements.

3.4. Required Training for a Limited Electrical Skilled Persons Certificate.

3.4.1. Other than electricians, all 5-Level Journeymen and 7-Level, Craftsmen that are prospective Limited Skilled Persons, will complete in house training to understand the differences between US and UK electrical wiring systems to ensure compliance with the Regulation 16 *Electricity at Work Regulations 1989*.

3.5. Emergency First Aid and Fire Training.

3.5.1. All prospective Electrical Skilled Persons will complete Emergency First Aid training, Fire Precautions training, and undergo site induction training in accordance with JSP 375 Vol 3 Ch 8 Regulation 2.6.1. First Aid training is required once every year and Fire Precautions Training is required once every year.

3.5.2. Emergency First Aid Training will cover the following:

3.5.2.1. Resuscitation (as appropriate for the treatment of electric shock).

3.5.2.2. Treatment of burns.

3.5.2.3. Control of bleeding.

3.5.2.4. Treatment of the unconscious casualty.

3.5.2.5. Contents of First-Aid boxes and kits.

3.5.2.6. Emergency Contact Numbers.

3.5.3. In-house training may be provided by the Fire Department. Fire Training will cover the following:

3.5.3.1. The characteristics of and the correct use of different types of hand held fire extinguishers.

3.5.3.2. The hazards presented by insulating oil under arcing and fault conditions.

3.5.3.3. The hazards presented by the storage of insulating oil in open containers during maintenance.

3.5.3.4. The importance of avoiding the storage of combustible material in switch rooms.

3.5.3.5. The action to be taken in the event of an electrical fire, such as electrical isolation of the Equipment, summoning of help, closing doors to exclude oxygen and

deciding whether it is safe to attempt to contain the fire or whether it is to be left to professional firefighters.

3.5.3.6. Personnel working on equipment containing insulating fluids other than oil are to be trained in the hazards presented by the fluids under arcing and fault conditions and the hazards presented by the storage of the fluids in open containers during maintenance. In-house training may be provided by the Fire Department.

3.6. MOD JSP 375 Volume 3, Chapter 3, “*Electricity*”, Familiarization:

3.6.1. Prospective General Electrical Skilled Persons and Limited Electrical Skilled Persons will have an adequate knowledge of the relevant parts of JSP 375 for electricity prior to being formally appointed by the CAP.

3.6.2. Personnel will obtain a copy of the Electricity Safety Rule Book. Contact the installation CAP for information.

3.6.3. Personnel may familiarize themselves with this material through:

3.6.3.1. Formal instruction may be provided by an MOD approved outside agency. Contact the installation CAP for information.

3.6.3.2. In-house instruction provided by the employing organization who has received formal instruction by an Approved MOD training provider.

3.6.3.3. Self study of the Electricity Safety Rule Book. Contact the installation CAP for information.

3.7. Appointment Interview.

3.7.1. The Supervisor of the prospective General and Limited Electrical Skilled Person will nominate the individual by submitting to the CAP an Appointment Application Form and request an Appointment Interview. Contact the CAP for the most current Appointment Application Form/nomination procedures.

3.7.2. In the Appointment Interview for General Electrical Skilled Persons, the CAP will:

3.7.2.1. Confirm familiarity with the site.

3.7.2.2. Confirm successful completion of all required training courses.

3.7.2.3. Confirm completion and currency of emergency first aid and fire training.

3.7.2.4. Orally evaluate JSP 375 Volume 3, Chapter 3, Familiarization.

3.7.3. In the Appointment Interview for Limited Electrical Skilled Persons, the CAP will:

3.7.3.1. Confirm familiarity with the site.

3.7.3.2. Confirm familiarization with the UK wiring guidelines.

3.7.3.3. Orally evaluate JSP 375 Volume 3, Chapter 3, Familiarization.

3.7.4. On satisfactory completion of the interview, the CAP will issue the appropriate Skilled Person Certificate. The Skilled Person Certificate is valid for three years. Prior

to the three year point, the Electrical Noncommissioned Officer in Charge (NCOIC) or supervisor will coordinate with the CAP for a follow on Appointment Interview to assess competencies and award a new certificate.

3.7.5. On unsatisfactory completion of the interview, the CAP will provide feedback in writing to the Supervisor and Base Civil Engineer as to areas needing further attention. Supervisors can again nominate the individual as soon as they have made the necessary improvements.

3.7.6. The CAP may withdraw a certificate for a breach of safe electrical practices. In this event, the CAP will provide the BCE or Supervisor, in writing, within two duty days, the reasons for withdrawing a certificate. Supervisors can again nominate the individual as soon as they have made the necessary improvements.

3.8. Record Keeping.

3.8.1. The CAP shall maintain records of all interviews and appointments in accordance with the Air Force Records Disposition Instruction.

3.8.2. Appointed Skilled Person's supervisor will ensure their subordinate's training records are updated.

DAVE C. HOWE, Brigadier General, USAF
Director of Logistics, Installations and Mission Support

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 32-10, *Installations and Facilities*, 27 March 1995

AFI 32-1064, *Electrical Safe Practices*, 27 May 2006

AFI 32-1065, *Grounding Systems*, 1 October 1998

AFMAN 33-363, Management of Records, 1 March 2008

Air Force Records Disposition Schedule (RDS)

United Kingdom Electricity at Work Regulations, 1989, Regulation 16

The Ministry of Defence (MOD) Joint Services Publication (JSP) 375 Volume 3, Chapter 3, "Electricity".

Institution of Electrical Engineers (IEE) Wiring Regulation Course (17 Ed)

City & Guilds 2382, *Wiring Regulation*

City and Guilds 2391, *Inspection, Testing & Certification of Electrical Installations*

CompEX, Ex01 to Ex04, Competence in Explosive Atmospheres

Regulation 16 Electricity at Work Regulation, 1989

Abbreviations and Acronyms

AP—Authorized Person

BCE—Base Civil Engineer

CAP—Coordinating Authorized Person

IEE—Institution of Electrical Engineers

JSP—Joint Services Publication

MOD—Ministry of Defence (United Kingdom)

UK—United Kingdom

US—United States

USAF—United States Air Forces

Terms

General Electrical Skilled Person Certificate—Certified General Electrical Skilled Persons are recognized as "licensed" electricians able to safely carry out alterations on existing electrical circuits and complete new electrical installations in accordance with UK law and the Ministry of Defence (MOD) Joint Services Publication (JSP) 375 Volume 3, Chapter 2 "Electricity".

Limited Electrical Skilled Person Certificate—Certified Limited Electrical Skilled Persons are recognized as having suitable electrical knowledge and are able to conduct only limited electrical work associated with their field of expertise such as Power Production.

Note: The following definitions apply to this document and come from (JSP) 375 Volume 3, Chapter 3, “Electricity” and are standard UK definitions. For further general definitions, see (JSP) 375 Volume 3, Chapter 3, “Electricity”:

Skilled Person—A person approved by an Authorized Person for defined work and with sufficient technical knowledge and experience to prevent danger or, where appropriate, injury, which electricity may create in the person's working environment.

Authorized Person—Abbreviation within this document for Authorized Person (Electrical). A person who has been appointed in writing by the Authorizing Engineer (Electrical) on behalf of the Commanding Officer/Head of Establishment to be responsible for the implementation and operation of these Rules and Procedures. In this document, when reference is made to 'the Authorized Person' this means the duty Authorized Person (Electrical), and when reference is made to 'an Authorized Person' this means any Authorized Person (Electrical) who may be on or off duty.

Authorizing Engineer—An engineer whose appointment includes the responsibility for implementing and monitoring particular Rules and Procedures appropriate to safe systems of work.

Coordinating Authorized Person—An Authorized Person (Electrical) who coordinates the actions of other Authorized Persons (Electrical) and acts as focal point for health and safety information and other guidance.

Electrical Equipment—Anything used, intended to be used or installed for use, to generate, provide, transmit, transform, rectify, convert, conduct, distribute, control, store, measure or use electrical energy.

Electrical Installation—An assembly of associated Electrical Equipment to fulfill a specific purpose, which forms part of a System.

Hazardous Area—Any location in which there is danger or a risk to health. The danger or risk may be due to any hazard, including the presence of combustible material, explosive material, poisonous substances, electromagnetic radiation, or may be due to the location of the work such as the danger posed by a confined space.

Permit to Work (Electrical)—Written authority as Model Form No. 3 issued by the Authorized Person (Electrical) for work to be undertaken on Electrical Equipment in a Non-hazardous Area.