



**DEPARTMENT OF THE AIR FORCE**  
**HEADQUARTERS AIR FORCE CIVIL ENGINEER SUPPORT AGENCY**

13 April 2012

FROM: HQ AFCESA/CEO  
139 Barnes Drive Suite 1  
Tyndall AFB FL 32403-5319

SUBJECT: **Engineering Technical Letter (ETL) 12-9: Personnel Certification Requirements for Inspection of Lightning Protection Systems (LPS) on Nuclear Weapons Maintenance, Handling, and Storage Facilities**

**1. Purpose.** This ETL provides training and experience criteria for personnel inspecting LPS on new and existing Air Force nuclear weapons maintenance, handling, and storage facilities. Requirements of this ETL are mandatory.

**Note:** Use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

**2. Application:** Air Force installations with nuclear weapons maintenance, handling, and storage facilities.

**2.1. Authority:**

- AFI 32-1065, *Grounding Systems*.
- AFMAN 91-201, *Explosives Safety Standards*.

**2.2. Coordination:**

- Headquarters Air Force Safety Center, Weapons Safety Division (HQ AFSEC/SEW).
- Major command (MAJCOM) electrical engineers.

**2.3. Effective Date:** Immediately.

**2.4. Intended Users:**

- MAJCOM engineers.
- Base civil engineers (BCE).
- Inspectors General (or equivalent) teams.

**3. Referenced Publications:**

**3.1 Air Force:**

- ETL 11-12 Grounding, Bonding, Testing and Recordkeeping for Communications Facilities, 24 February 2011, [http://www.wbdg.org/ccb/AF/AFETL/etl\\_11\\_12.pdf](http://www.wbdg.org/ccb/AF/AFETL/etl_11_12.pdf).

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- AFI 32-1063, Electric Power Systems, 10 June 2005, <http://www.e-publishing.af.mil/>.
- AFI 32-1065, Grounding Systems, 1 October 1998, <http://www.e-publishing.af.mil/>.
- AFMAN 91-118, Safety Design and Evaluation Criteria for Nuclear Weapon Systems, 4 August 2010, <http://www.e-publishing.af.mil/>.
- AFMAN 91-119, Safety Design and Evaluation Criteria for Nuclear Weapon Systems Software, 1 February 1999, <http://www.e-publishing.af.mil/>.
- AFMAN 91-201, Explosives Safety Standards, 17 November 2008, <http://www.e-publishing.af.mil/>.

### 3.2. Department of Defense (DoD):

- DoDM 6055.09M-STD, DoD Ammunition and Explosives Safety Standards, 29 February 2008, US Department of Defense, [http://www.wbdg.org/ccb/DOD/DOD4/dod6055\\_9std.pdf](http://www.wbdg.org/ccb/DOD/DOD4/dod6055_9std.pdf).

**4. Inspection of Nuclear Weapons Maintenance, Handling and Storage Facilities for Nuclear Surety Staff Assistance Visits (NSSAV), Initial Nuclear Surety Inspections (INSI), Nuclear Surety Inspections (NSI), and Defense Nuclear Surety Inspections (DNSI).** It is imperative that Air Force personnel who inspect LPS for weapons storage area (WSA) facilities are trained and experienced, and possess proper credentials to render consistent inspections across the Air Force. Paragraphs 4.1 and 4.2 establish minimum requirements for a “qualified inspector.” Other Air Force personnel may assist with inspections, but must be supervised by a qualified inspector. At no time can an unqualified inspector be the sole individual either on-site or performing an inspection. Only a qualified inspector is authorized to sign formal reports indicating compliance, discrepancies, and recommendations.

#### 4.1. Military:

**4.1.1.** Attendance and completion of an initial Air Force Inspection Agency inspector’s course.

**4.1.2.** Attendance and completion of AMMO-47, with completion certificate.

**4.1.3.** Attendance and completion of one advanced, commercial lightning protection course requiring a graded, four-hour examination and certificate of completion and competency, within three years prior to the inspection. Examples of commercial LPS training vendors are National Lightning Safety Institute ([www.lightningsafety.com](http://www.lightningsafety.com)) and Lightning Protection Institute (Designer Inspector Series examination) (<http://www.lightning.org>).

**4.1.4.** AFSC of 3E0X1, 7-level, with training commensurate to that level of expertise and experience.

**4.1.5.** Proficiency using test equipment required to obtain test readings for inspections referenced in paragraph 4.

**4.2. Civilian:**

**4.2.1.** Attendance and completion of AMMO-47, with completion certificate.

**4.2.2.** Attendance and completion of one advanced, commercial lightning protection course requiring a graded, four-hour examination and certificate of completion and competency, within three years prior to the inspection. (Reference paragraph 4.1.1.3.)

**4.2.3.** Ten years' experience in maintenance and inspection of LPS in a field equivalent to AFSC 3E0X1, 7-level.

**4.2.4.** Proficiency using test equipment required to obtain test readings for inspections referenced in paragraph 4.

**5. Point of Contact (POC).** Recommendations for improvements to this ETL are encouraged and should be furnished to the Air Force Lightning Protection Systems Engineer, HQ AFCESA/CEOA, DSN 523-6995 or commercial (850) 283-6995, or via e-mail to [AFCESAReachBackCenter@tyndall.af.mil](mailto:AFCESAReachBackCenter@tyndall.af.mil).

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