

# Oilfield Explosives Safety

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# Oilfield Explosives Safety

## 1 Scope

This publication is applicable to chemical explosives used as an energy source to do work in oil- and gas-producing operations, and more specifically to explosives intended for use inside a wellbore. The purpose of this recommended practice (RP) is primarily to prevent the inadvertent initiation of these explosives at the wellsite but also includes some recommendations for safe and secure storage and transportation and handling, as well as requirements for design and manufacture of selected equipment.

Additionally, there are five annexes included as part of this RP that provide important guidance:

- Annex A: Critical Safety Equipment for Operations;
- Annex B: Explosive Arming and Disarming Safety Critical Fundamentals—Electric Detonators;
- Annex C: Recommended Safety Equipment and Processes;
- Annex D: Stray Voltage Worksheet;
- Annex E: Wellsite Audit Checklist;

With the exception of Annex A, these annexes have been provided as reference material; they are not intended to replace the full text of this document but rather are provided as supplemental information. Operating companies and/or service companies may establish more comprehensive and exhaustive materials, as they deem appropriate for their particular situation(s).

While some chemicals intended for various nonexplosive applications can prove explosive when misused (such as lithium batteries), it is not the intent of this RP to address these materials.

## 2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any addenda) applies.

IME Safety Library Publication 2011: *Safety Guide for the Prevention of Radio Frequency Radiation Hazards in the Use of Commercial Electric Detonators (Blasting Caps)*

MIL-DTL-23659F<sup>2</sup>: *Detail Specification: Initiators, Electric, General Design Specifications for*

U.S. DOL Title 29 – CFR Part 1910.119, *Process Safety Management of Highly Hazardous Chemicals*

VG 95076-11:2014<sup>4</sup>, *Electromagnetic Compatibility (EMC)—Electromagnetic Compatibility of Electroexplosive Devices (EED)—Part 11: Test Procedure for Proof of Immunity to Disturbance of EED Towards Pulses of Electrostatic Discharges*

<sup>1</sup> Institute of Makers of Explosives, 1212 New York Ave, NW, Suite 650, Washington, DC 20005, [www.ime.org](http://www.ime.org).

<sup>2</sup> U.S. Department of Defense, 1400 Defense Blvd, Washington, DC 20301, [www.everyspec.com](http://www.everyspec.com).

<sup>3</sup> U.S. Department of Labor, 200 Constitution Ave, NW, Washington, DC 20210, [www.dol.gov](http://www.dol.gov).

<sup>4</sup> German Institute for Standardization (DIN), Saatwinkler Damm 42/43, 13627 Berlin, Germany, [www.din.de](http://www.din.de).