

National Institute for Occupational Safety and Health

Comments to the Mine Safety and Health Administration (MSHA)

Formal comments from the National Institute for Occupational Safety and Health (NIOSH) on Electronic Detonators Direct Final Rule; Request for comments

Docket Number: MSHA-2019-0007; RIN 1219-AB88

February 5, 2020



**Centers for Disease Control
and Prevention**
National Institute for Occupational
Safety and Health

The National Institute for Occupational Safety and Health (NIOSH) has reviewed the Mine Safety and Health Administration (MSHA) direct final rule *Electronic Detonators* published in the *Federal Register* (FR) on January 14, 2020 (85 FR 2022). NIOSH offers the following comment.

The new rule differentiates electronic and electric detonators. MSHA finds that electronic detonator systems have a reduced sensitivity to stray electrical currents and radio frequencies. NIOSH research [Waynert and Holloway 2013] found that radio frequency reflecting surfaces can enhance transmitted electric fields with the potential to generate stray electrical currents in lead wires of electric detonators.

Reference

Waynert J, Holloway CL [2013]. Underground mine environmental impact on RF coupling to electric blasting caps. In: 2013 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, July 7–13, 2013, Orlando, Florida. Piscataway, NJ: IEEE Antennas and Propagation Society, pp. 1918–1919, <http://dx.doi.org/10.1109/APS.2013.6711617>.