

Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities

2020



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NFPA® 122

Standard for

Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities

2020 Edition

This edition of NFPA 122, *Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities*, was prepared by the Technical Committee on Mining Facilities. It was issued by the Standards Council on November 4, 2019, with an effective date of November 24, 2019, and supersedes all previous editions.

This edition of NFPA 122 was approved as an American National Standard on November 24, 2019.

Origin and Development of NFPA 122

In 1978, the Technical Committee on Mining Facilities, through its membership and current Mine Safety and Health Administration regulations, identified the need for guidance in storage and handling of flammable and combustible liquids in underground nonmetal mines. The first edition of NFPA 122 was approved in 1986 as a result and was titled NFPA 122, *Storage of Flammable and Combustible Liquids Within Underground Metal and Nonmetal Mines (Other than Coal)*. The second edition was issued in 1990 and included a variety of minor editorial changes to provide consistency with the other NFPA Mining Facilities documents.

The 1995 edition was a complete revision that focused the document on the overall fire protection of metal and nonmetal mines, as indicated by the document's new title, NFPA 122, *Standard for Fire Prevention and Control in Underground Metal and Nonmetal Mines*. Furthermore, this edition incorporated the requirements that were previously included in NFPA 124, *Standard for Fire Protection of Diesel Fuel and Diesel Equipment in Underground Mines*, which was withdrawn. Further changes included editorial corrections and revisions that provided consistency with other NFPA mining-related standards.

The 2000 edition of the standard was reconfirmed by the technical committee. There were no technical changes made. The fire risk assessment material in Appendix A was editorially moved to Appendix B.

In 2004, the Technical Committee reorganized the mining standards and combined NFPA 121, *Standard on Fire Protection for Self-Propelled and Mobile Surface Mining Equipment*, with NFPA 122. The committee also added a new Chapter 13, Fire Protection of Surface Metal Mineral Processing Plants. The committee incorporated the concept of conducting a fire risk assessment throughout the standard.

For the 2010 edition, the technical committee assigned a task group the responsibility of revising NFPA 122 to update the existing fire protection requirements that were included in portions of existing Sections 4.3 and 7.4 to improve operator safety and the reliability of the required suppression systems. Similarly, Chapter 12, Fire Prevention and Fire Protection of Surface Mining Equipment, was completely revised to make it consistent with fire protection industry practices and the updated provisions in NFPA 120, *Standard for Fire Prevention and Control in Coal Mines*.

Concurrently, another task group was assigned the responsibility of revising NFPA 122 to include fire protection requirements for hydro-metallurgical solvent extraction (SX) plants. This resulted in two new sections being added into Chapter 13, Section 13.18 for new and existing hydrometallurgical SX plants and Section 13.19 for new hydro-metallurgical SX plants. Sections 13.18 and 13.19 include a fire risk assessment of the facility and requirements for fixed fire suppression systems. To support these new sections on hydro-metallurgical SX plants, additional references and definitions were added to Chapters 2 and 3, respectively.

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The Metal/Nonmetal Mining Task Group for the 2010 edition consisted of the following members: Larry Moore, Chair, FM Global; Steve Behrens, Swiss Re; Dennis Brohmer, Tyco Fire Suppression & Building Products; J. J. Kenny, Marsh; L. Harvey Kirk, MSHA; Mario Orozco, Zurich; Pierre Tousignant, QIT Quebec; and Mark Yarbro, Freeport MacMoran Mining.

The 2014 edition of NFPA included various technical and editorial updates. The committee established a common definition and a protection scheme for *self-propelled*, *mobile equipment* and *portable equipment*.

In the 2020 edition, the technical committee added new fire safety material to Chapter 13 related to the use of combustible concentrators in gravimetric ore concentrator facilities. Direction has been provided to the stakeholder regarding best practices for fire suppression and steps to be taken during welding and cutting operations within the vicinity of combustible concentrators. In addition, associated Annex A material has been added for further guidance on fire suppression and welding and cutting operations near combustible concentrators.