

president, secretary, partner, member, treasurer, general counsel) who has been empowered by the intended registrant to sign such documents; and

(2) Include documentation that demonstrates the registrant is incorporated or otherwise authorized to do business in the United States.

(b) *Statement of Registration Certification.* The Statement of Registration of the intended registrant shall include a certification by an authorized senior officer of the following:

(1) Whether the intended registrant or its parent, subsidiary, or other affiliate listed in the Statement of Registration, or any of its chief executive officers, presidents, vice presidents, secretaries, partners, members, other senior officers or officials (e.g., comptroller, treasurer, general counsel), or any member of the board of directors of the intended registrant, or of any parent, subsidiary, or other affiliate listed in the Statement of Registration:

(i) Has ever been indicted or otherwise charged (e.g., charged by criminal information in lieu of indictment) for or has been convicted of violating any U.S. criminal statutes enumerated in § 120.6 of this subchapter or violating a foreign criminal law on exportation of defense articles where conviction of such law carries a minimum term of imprisonment of greater than 1 year; or (ii) Is ineligible to contract with, or to receive a license or other approval to import defense articles or defense services from, or to receive an export license or other approval from, any agency of the U.S. Government; and

(2) Whether the intended registrant is foreign owned or foreign controlled (see § 120.65 of this subchapter). If the intended registrant is foreign owned or foreign controlled, the certification shall include an explanation of such ownership or control, including the identities of the foreign person or persons who ultimately own or control the registrant. This requirement applies to a registrant who is a U.S. person and is owned or controlled by a foreign person. It also applies to a registrant who is a foreign person and is owned or controlled by a foreign person from the same country or a foreign person from another country.

(c) *Incomplete registration submission.* The Directorate of Defense Trade Controls will notify the registrant if the Statement of Registration is incomplete either by notifying the registrant of what information is required or through the return of the entire registration package.

(d) *Frequency.* A person who is required to register and pay a registration fee must renew the registration and pay a registration fee on an annual basis after initial registration.

(e) *Renewal of registration.* A registrant must submit its request for registration renewal at least 30 days but no earlier than 60 days prior to the expiration date. Notice of the fee due for the next year's registration will be sent to the registrant of record at least 60 days prior to its expiration date.

(f) *Lapse in registration.* A registrant who fails to renew a registration and, after an intervening period, seeks to register again must pay registration fees for any part of such intervening period during which the registrant engaged in the business of manufacturing or exporting defense articles or defense services.

■ 4. Revise § 122.3 to read as follows:

§ 122.3 Registration fees.

(a) *Registration fee.* A person who is required to register must submit payment of a fee following the payment guidelines available on the Directorate of Defense Trade Controls website at www.pmdtcc.state.gov. The fee to be paid shall be one of the following:

(1) *Tier 1.* The first tier is a set fee of \$3,000 per year. This applies to new registrants. It also applies to those who are renewing their registrations and for whom the Department did not issue a favorable determination on a license application or other request for authorization during the 12-month period ending 90 days prior to the expiration of the current registration.

(2) *Tier 2.* The second tier is a set fee of \$4,000 for registrants renewing their registrations who have submitted license applications or other requests for authorization and received five or fewer favorable determinations during the 12-month period ending 90 days prior to the expiration of their current registration.

(3) *Tier 3.* The third tier is a calculated fee for registrants who have submitted license applications or other requests for authorization and received more than five favorable determinations during the 12-month period ending 90 days prior to the expiration of their current registration. For these registrants, the fee calculation is \$4,000 plus \$1,100 times the total number of favorable determinations over five.

(b) *Website, discounts, and further guidance.* Information on certain discounts for registrants who are wholly exempt from income tax pursuant to 26 U.S.C. 501(c)(3), and for Tier 3 registrants who are low-value exporters or temporary importers are available on

the Directorate of Defense Trade Controls website at www.pmdtcc.state.gov by selecting “Conduct Business” on the top heading bar, then selecting “Registration” from the left menu bar, and finally selecting “Payment of Registration” from the subsequent left menu bar. Other guidance and information relevant to the payment of registration fees is also available on the website.

PART 129—REGISTRATION AND LICENSING OF BROKERS

■ 5. The authority citation for part 129 continues to read as follows:

Authority: Section 38, Pub. L. 104–164, 110 Stat. 1437, (22 U.S.C. 2778); E.O. 13637, 78 FR 16129.

§ 129.8 [Amended]

6. Amend § 129.8, in the first sentence of paragraph (b)(1), by removing the text “and a fee following the fee guidelines available on the Directorate of Defense Trade Controls website at www.pmdtcc.state.gov.” and adding in its place “and the Tier 1 fee specified in § 122.3(a)(1) of this subchapter, regardless of how many favorable determinations the person received during the 12-month period ending 90 days prior to the expiration of their current registration.”

Stanley L. Brown,

Acting Assistant Secretary, Bureau of Political-Military Affairs, Department of State.

[FR Doc. 2024–29032 Filed 12–6–24; 4:15 pm]

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DEPARTMENT OF LABOR

Mine Safety and Health Administration

30 CFR Parts 18 and 74

[Docket No. MSHA–2020–0018]

RIN 1219–AB93

Testing, Evaluation, and Approval of Electric Motor-Driven Mine Equipment and Accessories

AGENCY: Mine Safety and Health Administration (MSHA), Department of Labor.

ACTION: Final rule.

SUMMARY: The Mine Safety and Health Administration (MSHA) is revising its regulations that set out the testing, evaluation, and approval requirements for electric motor-driven mine equipment and accessories intended for use in gassy mines. Under this final rule, MSHA incorporates by reference

eight ANSI-approved voluntary consensus standards that are suitable for gassy mining environments to protect against fire or explosion hazards, and accepts them as alternatives to the existing testing, evaluation, and approval requirements for electric motor-driven mine equipment and accessories. This final rule offers more flexibility in the testing, evaluation, and approval requirements that product designers and manufacturers must meet in seeking MSHA approvals. This final rule will promote the use of innovative and advanced technologies that lead to improvements in mine safety and health.

DATES:

Effective date: January 9, 2025.

Incorporation by reference date: The incorporation by reference of the publications listed in the rule is approved by the Director of the Federal Register as of January 9, 2025.

ADDRESSES:

Docket: Access rulemaking documents electronically at www.msha.gov/regsinfo.htm or www.regulations.gov [Docket No. MSHA–2020–0018]. Obtain a copy of a rulemaking document from the Office of Standards, Regulations, and Variances, MSHA, 201 12th Street South, Arlington, Virginia 22202–5452, by request to (202) 693–9440 (voice) or (202) 693–9441 (facsimile). These are not toll-free numbers.

Email Notification: To subscribe to receive email notification when the Agency publishes rulemaking documents in the **Federal Register**, go to www.msha.gov.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances, MSHA, at Noe.Song-Ae.A@dol.gov (email), (202) 693–9440 (voice); or (202) 693–9441 (facsimile). These are not toll-free numbers.

SUPPLEMENTARY INFORMATION:

- I. Executive Summary
 - A. Purpose of the Final Rule
 - B. Summary of Major Provisions
 - 1. Accept and Use Voluntary Consensus Standards
 - 2. Incorporate by Reference Voluntary Consensus Standards
 - 3. Review and Update the Voluntary Consensus Standards
- II. Legal Authority for Regulatory Action
- III. Rulemaking History
- IV. Background
 - A. Product Approval Authority
 - B. Product Approval Process
 - C. Voluntary Consensus Standards
 - 1. Voluntary Consensus Standards in the Proposed Rule
- V. Comments Received on the Proposed Rule
- VI. Section-by-Section Analysis

- A. Section 18.2—Definitions
- B. Section 18.6—Applications
- C. Section 18.15—Changes After Approval or Certification
- D. Subpart F—Voluntary Consensus Standards
 - 1. Section 18.101—Acceptance and Use of Voluntary Consensus Standards
 - 2. Section 18.102—Approved (Incorporated by Reference) Voluntary Consensus Standards
 - 3. Section 18.103—Review and Update of Applicable Voluntary Consensus Standards
- E. Conforming Amendments
- VII. Regulatory Impact Analysis
 - A. Executive Orders 12866: Regulatory Planning and Review, as Amended by E.O. 14094: Modernizing Regulatory Review, and 13563: Improving Regulation and Regulatory Review
- VIII. Feasibility
- IX. Regulatory Flexibility Act; Small Business Regulatory Enforcement Fairness Act; and Executive Order 13272
- X. Paperwork Reduction Act of 1995
- XI. Other Regulatory Considerations
 - A. National Environmental Policy Act
 - B. The Unfunded Mandates Reform Act of 1995
 - C. The Treasury and General Government Appropriations Act of 1999: Assessment of Federal Regulations and Policies on Families
 - D. Executive Order 13132: Federalism
 - E. Executive Order 12630: Government Actions and Interference With Constitutionally Protected Property Rights
 - F. Executive Order 12988: Civil Justice Reform
 - G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments
 - H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
 - I. Executive Order 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government
 - J. Congressional Review Act
 - K. Pay-As-You-Go Act of 2023
 - L. Incorporation by Reference
- XII. References

I. Executive Summary

This final rule revises MSHA's regulations under title 30, Code of Federal Regulations (CFR) part 18 (Part 18), concerning testing, evaluation, and approval specifications and requirements for electric motor-driven mine equipment and accessories intended for use in hazardous atmospheres encountered in gassy mines. While this final rule does not change MSHA's approval process, it offers more flexibility in the testing, evaluation, and approval requirements that product designers and manufacturers must meet in seeking MSHA approvals. Under the final rule,

manufacturers that design and build electric motor-driven equipment and accessories conforming to voluntary consensus standards (VCS) may obtain MSHA approval without having to redesign or modify the equipment to meet MSHA-unique requirements.¹

This final rule incorporates by reference eight VCS approved by the American National Standards Institute (ANSI) and allows applicants seeking MSHA approvals to follow either Part 18 requirements that are unique to MSHA or the ANSI-approved VCS. While adding flexibility for product designers and manufacturers, this final rule maintains the safety measures associated with the Agency's testing, evaluation, and approval requirements for equipment used in gassy mines.

A. Purpose of the Final Rule

This final rule will promote the use of innovative and advanced technologies for electrical equipment used in gassy mines, leading to improvements in mine safety and health. Until now, the introduction of innovative and advanced electrical equipment in U.S. mines may have been limited by the need to meet MSHA-unique requirements for approval. The final rule will allow manufacturers that design and build electric motor-driven equipment and accessories (hereafter referred to as electrical equipment) conforming to the VCS listed in Part 18 to obtain MSHA approval without having to redesign or modify the equipment to meet MSHA-unique requirements. The use of VCS will make the approval process more efficient for applicants seeking MSHA approval for their products. As a result, MSHA's acceptance and use of VCS will make technologically advanced equipment available for use in U.S. mines more quickly and cost-effectively than is possible under existing MSHA-unique requirements, without sacrificing the safety measures associated with MSHA approvals.

Additionally, the Office of Management and Budget (OMB) Circular A–119, entitled “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities.” (Jan. 27, 2016 (81 FR 4673)) directs agencies to use VCS in lieu of

¹ MSHA's approval regulations (30 CFR parts 6, 7, 18, 19, 20, 22, 23, 27, and 28) govern the process through which manufacturers may obtain MSHA approval, certification, extension, or acceptance of certain electrical products for use in underground mines. Each of these separate approval actions has specific application procedures and technical requirements for testing and evaluation. Along with “approval,” the terms “certification,” “extension,” and “acceptance” also denote MSHA approval.

government-unique standards except where doing so would be inconsistent with law or otherwise impractical. In response to Circular A-119 and stakeholder comments, MSHA is incorporating the use of VCS in this final rule. The VCS included in the final rule are suitable for gassy mining environments and provide protection against fire or explosion hazards.

B. Summary of Major Provisions

The final rule has three major provisions: accepting and using VCS; incorporating by reference eight ANSI-approved VCS while also allowing the use of existing Part 18 requirements for MSHA approvals; and reviewing more recent versions of the approved VCS as well as other VCS for use in Part 18. Below is a summary of each of the three major provisions.

1. Accept and Use Voluntary Consensus Standards

MSHA is accepting the use of VCS in lieu of existing Part 18 requirements in its approval process for products to be used in gassy mines. Specifically, MSHA is accepting VCS that the Agency has incorporated by reference and determined are suitable for gassy mining environments and that provide protection against fire or explosion, if used in their entirety and without modification, as alternatives to the requirements in subparts B through E in Part 18. Using and accepting VCS is also consistent with the principles and policies in Circular A-119.

2. Incorporate by Reference Voluntary Consensus Standards

This final rule is incorporating by reference eight ANSI-approved VCS in their entirety and without modification. These eight VCS are ANSI 60079 series standards for explosive atmospheres. When product designers or manufacturers seek MSHA approval under Part 18, the specifications of these eight ANSI-approved VCS can be used, as applicable.

The final rule is not incorporating by reference the six VCS from the International Electrotechnical Commission (IEC) that were included in the proposed rule. This change was made due to concerns that the IEC standards may not provide sufficient protection against fire or explosions when used for electric motor-driven mine equipment and accessories in U.S. mines because the IEC standards do not contain certain U.S.-specific electrical and safety requirements that are included in the ANSI-approved VCS.

Also, unlike the proposed rule, the final rule is not restricting applicants to

use only VCS after a transition period of 12 months. The final rule allows product designers and manufacturers to choose either existing Part 18 requirements or the ANSI-approved VCS when they seek approval for new products or for modification to MSHA-approved products. This change was made in response to public comments requesting more time for product designers and manufacturers to adapt their designs and equipment to the VCS specifications, as well as raising the concern that the mandatory transition to VCS would be problematic for some product manufacturers. The final rule provides more flexibility to both new applicants for product approval and current approval holders seeking product modifications.

3. Review and Update the Voluntary Consensus Standards

Under this final rule, MSHA will review, in the future, more recent editions of the VCS listed in Part 18 to determine whether they can be used in their entirety and without modification for MSHA approval. Also, MSHA may review VCS not listed in Part 18 for possible future adoption.

II. Legal Authority for Regulatory Action

This final rule is issued under section 508 of the Federal Mine Safety and Health Act of 1977 (Mine Act), as amended. 30 U.S.C. 957. Section 508 of the Mine Act gives the Secretary the authority to issue regulations to carry out any provision of the Mine Act.

III. Rulemaking History

In 2018, MSHA sought stakeholders' assistance in identifying regulations that could be repealed, replaced, or modified without reducing miners' safety or health. As a result of this solicitation, MSHA received recommendations for the Agency's product approval regulations. Specifically, stakeholders recommended that MSHA replace Part 18 requirements with VCS to provide a clearer and timelier path for approval of new technologies that could improve the health and safety of miners.

On November 19, 2020, MSHA published in the **Federal Register** a notice of proposed rulemaking that would revise the existing testing, evaluation, and approval requirements for electric motor-driven mine equipment and accessories intended for use in gassy mines to include VCS (85 FR 73656). MSHA proposed to incorporate by reference 14 VCS (8 approved by ANSI and 6 by IEC) in their entirety and without modification to

replace, as applicable, existing approval requirements in Part 18.

During the comment period, MSHA received 20 comments from product manufacturers, safety certification companies, industry associations, a representative of a voluntary consensus standards body, the National Institute of Occupational Safety and Health (NIOSH), and private citizens. All of the public comments are available at MSHA's website at www.msha.gov and at www.regulations.gov.

IV. Background

A. Product Approval Authority

The Mine Act requires MSHA to establish requirements for the technical design, construction, and testing of electrical products and to approve as "permissible" electrical equipment that meets MSHA's specifications. 30 U.S.C. 865. MSHA's requirements for product approval ensure that electrical equipment will not cause a fire or explosion if operated in hazardous atmospheres encountered in gassy mines, where, for example, methane-air mixtures are present. Before electrical equipment can be used in a gassy mine in the U.S., the equipment must first be approved for such use by MSHA. MSHA-approved equipment is affixed with an MSHA approval plate to indicate that the equipment is permitted for use in gassy mines.

MSHA approval requirements for mining or related equipment are organized by the type of equipment and are listed in different parts of 30 CFR.² Part 18 specifies the procedures and requirements for obtaining MSHA approval, certification, extension, or acceptance of electric motor-driven mine equipment and accessories intended for use in gassy mines. Examples of this equipment include remote control units for mining machinery, longwall mining systems, portable oxygen detectors, miner-wearable components for proximity detection systems, and powered air-purifying respirators (PAPRs).

To avoid a fire or an explosion, Part 18 requires electrical equipment to be designed in one of two ways. One method is to design intrinsically safe electrical equipment, which cannot produce a spark strong enough or temperatures sufficient to ignite hazardous gasses such as flammable methane-air mixtures. The other method

² For example, 30 CFR part 19 covers electric cap lamps, 30 CFR part 20 covers electric mine lamps other than standard cap lamps, 30 CFR part 22 covers portable methane detectors, 30 CFR part 23 covers telephones and signaling devices, and 30 CFR part 27 covers methane-monitoring systems.

is to house electrical equipment in an explosion-proof or flameproof enclosure that will withstand internal explosions of methane-air mixtures, without damage to or excessive distortion of its walls or covers and will prevent ignition of surrounding methane-air mixtures.

B. Product Approval Process

To market electrical equipment for use in U.S. gassy mines, product designers and manufacturers must obtain MSHA approval for these products. To obtain that approval, applicants must submit a sample of the completely assembled electrical machine or accessory, drawings and specifications of the product components, and any product-testing documentation, if available.

When MSHA receives an application for approval of a completely assembled electrical machine or accessory for use in gassy mines, MSHA reviews the application using the following general steps. MSHA first determines whether the applicant has met the technical requirements of Part 18 by examining the documents in the application package, which may include drawings, specifications, or photographs. These technical requirements, as described under subpart B of Part 18 (entitled *Construction and Design Requirements*), address design and construction specifications (e.g., quality of material, workmanship and design, electrical clearances, design of enclosures, and electrical protection of circuits and equipment). MSHA also checks the product or parts of the product against the technical requirements of Part 18, which may require disassembling and examining parts of the product for conformity to the submitted drawings and specifications.

As part of the product approval process, the product must also undergo testing and evaluation, which may include testing for explosion-proof characteristics of an enclosure and impact tests. Testing and evaluation can be conducted by MSHA or an independent laboratory, pursuant to 30 CFR 6.10, *Use of independent laboratories*.³ If the applicant chooses MSHA to conduct the testing and evaluation of the product, then MSHA tests and evaluates the applicant's product to determine whether it performs according to the safety and testing requirements. Alternatively, if

the applicant chooses an independent laboratory to conduct the testing and evaluation, then MSHA reviews the testing and evaluation results from the independent laboratory to determine whether the product performs according to the safety and testing requirements. MSHA will also verify the laboratory's independence and accreditation.

Once MSHA determines that the product meets all the approval requirements under Part 18 and is safe for use in gassy mines, the Agency issues an approval. The applicant then becomes an approval holder and must place an MSHA approval plate on the product to indicate that the product is permissible for use in gassy mines.

The use of the MSHA approval plate obligates the approval holder to maintain the quality of the completely assembled product according to the requirements upon which the approval was based. If an approval holder wants to modify an approved product and maintain its approval, then the approval holder must submit the proposed changes to MSHA. If the proposed changes are approved, MSHA issues either an extension of approval or a notice of acceptance of the modified product to the approval holder.

C. Voluntary Consensus Standards

The VCS that MSHA proposed to incorporate by reference were developed or approved by voluntary consensus standards bodies through the use of voluntary consensus standards development processes with the attributes described in OMB Circular A-119. According to Circular A-119, the VCS development process includes the following attributes or elements: openness; balance of interest; due process; appeals process; and consensus. Each of the 14 VCS considered by MSHA demonstrates these attributes because they were developed by standard-setting bodies through a transparent, open, and consensus-based process.

Of the 14 VCS that MSHA considered, 6 were developed by the International Electrotechnical Commission and 8 were approved by the American National Standards Institute. This final rule refers to these as IEC VCS (or non-ANSI approved VCS) and ANSI-approved VCS. Below the two VCS bodies and their standard-development processes are discussed.

International Electrotechnical Commission (IEC)

IEC is a global, not-for-profit membership organization that administers conformity assessment systems and publishes international

standards used in testing and certification of devices, systems, installations, and services. IEC's international standards reflect the global consensus of technical experts who are delegated by their countries to participate in the IEC. Members are technical committee representatives, as well as experts nominated by their home countries' national committees in the areas of concern.

IEC generally develops a standard in the following manner. A proposal for a new or revised standard is generally driven by needs of specific stakeholder groups in one or several countries. During the preparatory stage, a working draft of the standard or revision is developed by an IEC committee (IEC, 2024b). The committee draft is submitted to all IEC members, including those who participate actively in IEC work, and those who have observer status only for comment and approval. Each national committee can submit its comments and then the committee members work together to reach a consensus on the technical content. Once consensus is reached among the committee members, the standard is published as an IEC international standard (IEC, 2024b).

American National Standards Institute (ANSI)

ANSI is a non-profit organization that administers and coordinates the U.S. voluntary standards and conformity assessment system by working in close collaboration with stakeholders from industry and government to identify and develop American National Standards (ANSI, 2024b). ANSI accredits the procedures of VCS bodies including UL Solutions (UL), formerly Underwriters Laboratories, and the International Society of Automation (ISA) (ANSI, 2024c). ANSI accreditation ensures that standards developed by the VCS bodies meet the standard-development process requirements for openness, balance, consensus, and due process, and adhere to neutral oversight set by ANSI. The accredited VCS bodies are allowed to submit individual standards for approval as an American National Standard (ANSI, 2024d). For a standard to become ANSI-approved, its submission and review process must have met ANSI's requirements, and the standard must have achieved consensus (ANSI, 2024d). For example, those standards that are submitted by an ANSI-accredited VCS body like UL or ISA and are later approved by ANSI are classified as ANSI-approved standards and labeled as ANSI/UL or ANSI/ISA.

³ An independent laboratory is defined in 30 CFR 6.2 as a laboratory that: (1) has been recognized by a laboratory accrediting organization to test and evaluate products to a product safety standard, and (2) is free from commercial, financial, and other pressures that may influence the results of the testing and evaluation process.

1. Voluntary Consensus Standards in the Proposed Rule

In the notice of proposed rulemaking, MSHA proposed to incorporate by reference eight ANSI-approved and six IEC VCS in their entirety and without modification, to replace existing approval criteria in Part 18 for products covered by the VCS. These VCS included:

- ANSI/UL 60079–0 Ed. 7–2019, Explosive Atmospheres—Part 0: Equipment-General Requirements (Group I)
- ANSI/UL 60079–1 Ed. 7–2015, Standard for Explosive Atmospheres—Part 1: Equipment Protection by Flameproof Enclosures “d” (Group I, Level of Protection ‘da’)
- ANSI/ISA 60079–11 (12.02.01)–2014 Standard for Explosive Atmospheres—Part 11: Equipment Protection by Intrinsic Safety “i” (Group I, Level of Protection ‘ia’)
- ANSI/UL 60079–11 Ed. 6–2013, Standard for Explosive Atmospheres—Part 11: Equipment Protection by Intrinsic Safety “i” (Group I, Level of Protection ‘ia’)
- ANSI/UL 60079–18, Ed. 4–2015, Standard for Explosive Atmospheres—Part 18: Equipment Protection by Encapsulation ‘m’ (Group I, Level of Protection ‘ma’)
- ANSI/ISA 60079–25 (12.02.05)–2011 Standard for Explosive Atmospheres—Part 25: Intrinsically Safe Electrical Systems (Group I, Level of Protection ‘ia’)
- ANSI/UL 60079–25 Ed. 2–2011, Standard for Explosive Atmospheres—Part 25: Intrinsically Safe Electrical Systems (Group I, Level of Protection ‘ia’)
- ANSI/UL 60079–28 Ed. 2–2017, Standard for Explosive Atmospheres—Part 28: Protection of Equipment and Transmission Systems Using Optical Radiation (Group I, Equipment Protection Level ‘Ma’)
- IEC 60079–0, Ed. 7, Explosive atmospheres—Part 0: Equipment—General requirements (Group I)
- IEC 60079–1 Ed. 7, Standard for Explosive Atmospheres—Part 1: Equipment Protection by Flameproof Enclosures “d” (Group I, Level of Protection ‘da’)
- IEC 60079–11, Ed. 6, Explosive Atmospheres—Part 11: Equipment Protection by Intrinsic Safety “i” (Group I, Level of Protection ‘ia’)
- IEC 60079–18, Ed. 4.1, Explosive Atmospheres—Part 18: Equipment Protection by Encapsulation ‘m’ (Group I, Level of Protection ‘ma’)
- IEC 60079–25 Ed. 2, Explosive Atmospheres—Part 25: Intrinsically

Safe Electrical Systems (Group I, Level of Protection ‘ia’)

- IEC 60079–28 Ed. 2, Standard for Explosive Atmospheres—Part 28: Protection of Equipment and Transmission Systems Using Optical Radiation (Group I, Equipment Protection Level ‘Ma’)

The ANSI standards are based on the similarly numbered IEC standards. The ANSI standards include modifications of the IEC standards to account for U.S.-specific requirements (U.S. deviations). The U.S. deviations are developed by nationally recognized and vetted experts and are approved as American National Standards.

Both the IEC and ANSI 60079 series standards listed above cover a wide array of topics concerning explosive atmosphere standards. The ANSI 60079 series standards are generally based on the IEC 60079 series standards but include U.S.-specific requirements to make them compatible or consistent with U.S. safety and industry specifications or practices.

V. Comments Received on the Proposed Rule

During the comment period of the notice of proposed rulemaking, MSHA received 20 comments from product manufacturers, safety certification companies, industry associations, a representative of a voluntary consensus standards body, NIOSH, and private citizens. This section presents public comments that are general in nature or crosscutting because they span multiple provisions of the proposed rule. Those comments that are specific and directly related to individual provisions are addressed in section VI, *Section-by-Section Analysis*.

Generally, most commenters supported MSHA’s acceptance of VCS in its approval process. Some commenters, including NIOSH, Komatsu, Rosebud Mining Company, National Mining Association (NMA), Fletcher, and Alliance Coal, agreed with MSHA that adopting VCS in Part 18 would promote the use of innovative and advanced technologies that lead to improvements in mine safety and health (Document ID 0015; 0013; 0012; 0020; 0019; 0027).⁴

⁴This and all subsequent parenthetical citations of this form provide a reference for public comments located in the docket of this MSHA rulemaking (Docket No. MSHA–2020–0018) maintained at *Regulations.gov*. The four digit document ID number in the parenthetical citation refers to the last four digits of the document ID number in the docket. For example, “Document ID 0015” refers to document ID “MSHA–2020–0018–0015” in Docket No. MSHA–2020–0018 for this rulemaking. When multiple public comments are

Several other commenters stated that MSHA should expand the use of VCS beyond Part 18. MSHA received comments from NIOSH, Dräger, and an individual that the Agency should use VCS for part 22 of title 30 of the CFR, which concerns portable methane detectors (Document ID 0015; 0023; 0016). NIOSH further suggested that MSHA consider adopting VCS for various types of electrical equipment approved for use in mines. Examples include electric cap lamps under 30 CFR part 19, electric mine lamps other than standard cap lamps under 30 CFR part 20, telephones and signaling devices under 30 CFR part 23, and methane-monitoring systems under 30 CFR part 27 (Document ID 0015).

Any changes to other parts of title 30 are outside the scope of this rulemaking because the proposed rule addressed the use of VCS for product approvals only under Part 18 requirements. In future rulemakings, MSHA may address the expanded use of VCS that would be appropriate for other product approvals.

The Essential Minerals Association (EMA, formerly the Industrial Minerals Association—North America, IMA–NA) encouraged MSHA to participate actively in the VCS development processes at various VCS bodies so that the Agency can persuade other participants in the standard-setting bodies to propose changes in a standard and have those proposed changes thoroughly studied by experts and adopted if justified (Document ID 0018). MSHA agrees that active participation in a standards development process is useful and will consider participating in appropriate standards-development processes.

MSHA also received comments disapproving of MSHA’s use of VCS in general and of specific non-ANSI-approved VCS for Part 18. A private citizen stated that MSHA should not use VCS because of concerns about the lack of public participation and oversight in the VCS development process (Document ID 0026). The VCS in MSHA’s proposed rule, the commenter argued, were developed and set mostly by manufacturers, including entities outside of the U.S. and outside of the U.S. mining industry. In this commenter’s view, these entities change and modify the VCS without any cost-benefit analysis and with little or no regard for the impact on public safety. In addition, the commenter raised a concern about limited public access to the VCS because the VCS are not free of charge. Consol Energy, Inc. (Consol)

being cited, each public comment is separately listed within the citation.

stated that MSHA should make copies of standards available to operators by negotiating licensing agreements with the VCS bodies since there may be copyright issues with providing copies (Document ID 0014).

In response, MSHA points out that, as discussed earlier, all VCS listed above were developed and approved by voluntary consensus standards bodies through transparent, open, and consensus-based processes. The standard-development processes meet the attributes described in Circular A-119—openness, balance of interest, due process, an appeals process, and consensus. Regarding VCS being updated without any cost-benefit analysis, MSHA notes that final section 18.102 incorporates by reference eight voluntary consensus standards and identifies the specific edition of each VCS. Additionally, as indicated in final section 18.103, MSHA will review updated editions of the VCS and other VCS to determine whether they can be used to provide protection against fire or explosion. Following such review and determination, MSHA will use the appropriate rulemaking process. The rulemakings that MSHA conducts will include the assessment of potential impacts including societal costs and benefits, as required by Executive Order (E.O.) 12866, as amended by E.O. 14094, and E.O. 13563. Regarding public access to the VCS, MSHA notes that the VCS being incorporated by reference in the final rule will be available to the public for review at MSHA headquarters and at MSHA's Approval and Certification Center. More information on the availability of the VCS incorporated by reference in the final rule is presented in section XI.L, *Incorporation by Reference*.

UL opposed MSHA's proposal to accept non-ANSI standards, such as the IEC 60079 series (Document ID 0021). This commenter stated that the non-ANSI-approved standards do not include key explosion safety requirements specific to the U.S. One example UL cited was that the IEC 60079 series permit "less robust" electrical wiring methods (Document ID 0021).

After careful consideration of this comment and further review of the VCS concerning explosive atmospheres, MSHA has determined that the final rule will accept the eight ANSI-approved VCS only. In the proposed rule, given that many products conforming to the ANSI-approved and IEC VCS are broadly recognized across various industries and in other countries, MSHA considered that both ANSI-approved and IEC VCS provide an

appropriate level of safety for miners and others in work environments with hazards similar to those encountered in the mining industry. However, recognizing and agreeing with the commenter that the IEC VCS do not reflect U.S. explosion safety requirements, MSHA concluded that the six IEC VCS will not provide adequate protection against fire or explosion if used in their entirety and without modification. More discussion on this point is included in section VI, *Section-by-Section Analysis*, of this preamble.

Finally, MSHA received multiple comments regarding the Agency's approval process. Those comments generally concerned the following: (1) how the Agency's proposed acceptance of VCS affects the approval process; (2) whether the Agency should approve as "permissible" products that are tested by third-party entities, such as Nationally Recognized Test Laboratories (NRTLs) or other product-certification bodies; (3) whether the Agency should forgo the MSHA approval process and automatically accept products that are certified under VCS, and (4) whether the Agency should mandate third-party certification.

First, commenters questioned how the Agency's acceptance of VCS would affect the approval process. NIOSH, Fletcher, Matrix Design Group (hereafter referred to as "Matrix"), and KH Controls requested clarification on how MSHA's proposed incorporation by reference of the VCS would affect the Agency's product approval process (Document ID 0015; 0019; 0024; 0025). Additionally, a private citizen expressed concern that this rulemaking would remove the MSHA approval process (Document ID 0026). Consol stated that they believe the rule does not address protracted delays caused by the current approval process and that under the proposed rule the approval will continue to follow the same approval process which results in delays and discourages manufacturers from seeking approval (Document ID 0014).

MSHA clarifies that the final rule does not remove the MSHA approval process. MSHA will continue to review and approve as "permissible" all electrical equipment used in gassy mines. As explained above, MSHA's approval process (as described in section IV, *Background*, of this preamble) will remain unchanged under the final rule and will continue to ensure that electrical equipment used in gassy mines can be safely operated by miners in hazardous environments. This means that, under the final rule, all product designers and manufacturers seeking MSHA approval must submit

their application package for product approval, as specified in 30 CFR part 18. MSHA will continue to determine whether the electrical equipment is safe for use in gassy mines.

Second, MSHA received comments regarding whether to approve products that are tested by third-party entities, such as NRTLs or other product-certification bodies (Document ID 0010; 0015). Specifically, NIOSH commented that while MSHA must approve equipment, the mining community has expressed a strong preference for MSHA to accept testing and certification of equipment by NRTLs as the basis for the approval (Document ID 0015).⁵

MSHA notes that the Agency already accepts testing and evaluation by independent laboratories, including NRTLs, under its existing standards and approval process. As stated in section IV, *Background*, of this preamble, MSHA's existing approval process includes product testing and evaluation by either MSHA or an independent laboratory chosen by the applicant. Under 30 CFR 6.10, *Use of independent laboratories*, the Agency accepts testing and evaluation performed by an independent laboratory for purposes of MSHA product approval, provided that MSHA receives the information required by the application. Applicants that choose to use an independent laboratory for testing or evaluation must submit the test or evaluation results to MSHA for review, along with written evidence of the laboratory's independence and current recognition by an accrediting organization. MSHA will continue to accept, as part of a complete approval application under Part 18, testing and evaluation results from NRTLs or other independent laboratories.

Third, some commenters recommended that the Agency forgo the MSHA approval process when products are already certified under VCS (Document ID 0019; 0025; 0013). Fletcher expressed the opinion that certification to a listed VCS should be sufficient for MSHA approval (Document ID 0019). Matrix and Komatsu discussed the IEC Standards Relating to Equipment for Use in Explosive Atmospheres (IECEx) and the associated IEC certification system (IECEx System) (Document ID 0025,

⁵ A Nationally Recognized Testing Laboratory (NRTL) is a private-sector organization that OSHA has recognized as meeting the legal requirements in 29 CFR 1910.7 to perform testing and certification of products using consensus-based test standards. To receive OSHA's recognition as an NRTL, an organization must have the necessary capability both as a product safety testing laboratory and as a product certification body (OSHA, 2019).

0013).⁶ Matrix recommended that MSHA accept an approval certificate from accredited, independent IECEX Certification Bodies (ExCBs), under the IECEX System (Document ID 0025). Komatsu commented that, when more confidence is obtained in the IECEX scheme, MSHA should consider acceptance of the IECEX certification, removing the need for additional MSHA approvals (Document ID 0013).

MSHA does not automatically approve products that have laboratory approval certificates from certifying laboratories. Under the Mine Act, MSHA is responsible for safety standards for the protection of life and prevention of injuries in coal and other mines. 30 U.S.C. 811. To ensure safety, MSHA maintains oversight of the approval process. After MSHA determines that the product meets all the approval requirements and determines that the product is safe for use in gassy mines, the Agency will issue an approval and authorize the use of an MSHA approval plate.

Fourth, MSHA received a comment regarding whether to mandate third-party certification. A private citizen stated that the typical costs of obtaining VCS certification, depending on the complexity of the component or machine, is extremely excessive, and therefore, MSHA should not require VCS certification for approval (Document ID 0026).

MSHA does not and will not require VCS certification by a third-party laboratory for approvals. MSHA understands that some manufacturers have no intention to sell their products outside the U.S. mining industry or may be concerned with the costs of VCS certification in addition to the costs associated with MSHA approval. Under the final rule, when an application relies on the incorporated VCS as the basis for approval, VCS certification by a third-party laboratory is not mandated.

VI. Section-by-Section Analysis

A. Section 18.2—Definitions.

One definition is modified and two new definitions are added in final § 18.2, as in the proposed rule. MSHA received no comments on the three proposed definitions: *permissible equipment*, *voluntary consensus standard*, and *voluntary consensus standards body*.

⁶ The IECEX System is a conformity assessment system facilitated by the IEC and comprises the following: the IECEX Certified Equipment Scheme, the IECEX Certified Service Facilities Scheme, the IECEX Conformity Mark Licensing System, and the IECEX Certification of Personnel Competencies. www.iecex.com/information/about-iecex/ (last accessed August 16, 2024).

Under the final rule, the term *permissible equipment* is modified to mean “a completely assembled electrical machine or accessory for which an approval has been issued.” The reference to the Mining Enforcement and Safety Administration (MESA) is removed from the existing definition. Because MESA and all of its responsibilities were transferred to MSHA in 1978 under the Mine Act, the reference to MESA is no longer necessary (43 FR 12314, March 24, 1978).

Under the final rule, the new term *voluntary consensus standard* means “a safety standard that:

(1) Is developed or adopted by a voluntary consensus standards body; and

(2) Prescribes safety requirements applicable to equipment for which applicants are seeking approval, certification, extension, or acceptance under Part 18.”

Under the final rule, the new term *voluntary consensus standards body* means “a domestic or international organization that plans, develops, establishes, or coordinates voluntary consensus standards using agreed-upon procedures that are consistent with the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 3710) and the Office of Management and Budget’s Circular A–119 (Jan. 27, 2016).” Under Circular A–119, a voluntary consensus standards body plans, develops, establishes, or coordinates voluntary consensus standards using a voluntary consensus standards development process that includes the following attributes or elements: openness, balance of interest, due process, appeals process, and consensus. This type of standards body typically adopts, publishes, and makes the VCS it adopts available to the public. Lastly, the voluntary consensus standards body must maintain each voluntary consensus standard through a schedule of review.

B. Section 18.6—Applications

Final paragraph (e) of § 18.6 removes the existing requirement that each drawing an applicant submits under Part 18 include a warning stating that any changes in design must be authorized by MSHA before the changes are made to approved equipment. Final paragraph (e) of § 18.6 is unchanged from the proposal. MSHA did not receive any comments on this proposed change.

MSHA has determined that the warning on each drawing is unnecessary since MSHA notifies successful applicants in its approval letters that

approval holders cannot make changes to designs without MSHA approval. Furthermore, the Agency communicates with applicants during the approval process and ensures that they fully understand approval holders’ responsibility to notify MSHA of changes to approved equipment.

C. Section 18.15—Changes After Approval or Certification

Under the final rule, paragraph (c) of § 18.15 is revised to clarify the requirements for an application for a formal extension of approval or certification, or modification of an existing approval. In the proposed rule, MSHA would issue an approval if the changes in the equipment or component met: (1) the requirements applied to the last approval, certification, or formal extension; or (2) the VCS requirements listed in Part 18, as applicable. Under the proposed rule, any approval holder who chose to use VCS requirements for modifications of an existing approval could no longer go back and use the requirements in subparts B through E of Part 18 for future modifications. However, the final rule allows the approval holder to choose either existing Part 18 requirements or VCS requirements for each modification of an existing approval, irrespective of the last approval, certification, or formal extension. This means that under the final rule, for any modification of an existing approval, approval holders can choose either the existing Part 18 requirements or VCS requirements.

MSHA received two comments on this proposed rule language relating to the timing of the approval. The NMA and Matrix recommended that MSHA approve applications for a formal extension of approval or certification, or for modifications of an existing approval, within 30 days (Document ID 0020, 0025).

As stated previously, MSHA’s approval process will remain unchanged under the final rule and will continue to ensure that electrical equipment used in gassy mines can be safely operated by miners in hazardous environments. However, MSHA revised the final § 18.15 language to conform with the final rule, which allows the approval holder to choose either existing Part 18 requirements or VCS requirements for each modification of an existing approval.

D. Subpart F—Voluntary Consensus Standards

Like the proposed rule, the final rule adds a new subpart entitled “subpart F Voluntary Consensus Standards.” The new subpart F, consisting of three

sections—§§ 18.101 through 18.103—lays out how MSHA will generally accept, use, review, and update VCS, along with a list of specific VCS incorporated by reference in this final rule.

1. Section 18.101—Acceptance and Use of Voluntary Consensus Standards

Final § 18.101 is changed from the proposal to allow product designers and manufacturers to choose either existing Part 18 requirements or the listed VCS requirements. Section 18.101 sets forth how MSHA will accept and use VCS. In the proposed rule, paragraph (a) included MSHA's intent to replace the requirements in subparts B through E of Part 18 with VCS in their entirety and without modification. In proposed paragraph (b), a transition period of 12 months was provided, during which product designers and manufacturers seeking MSHA approval would be allowed to use either existing Part 18 requirements or VCS requirements. Once the transition period ended, the use of VCS would have been required under proposed paragraph (c).

In the final rule, final paragraphs (a) and (b) differ from the proposed rule to allow the use of either the VCS or the existing Part 18 requirements. Consequently, there is no 12-month transition period to using VCS only, so proposed paragraph (c) is not included in the final rule. Under the final rule, product designers and manufacturers can choose either existing Part 18 requirements or VCS requirements for MSHA approval because the final rule includes no requirement to transition to the use of only VCS for MSHA approvals. Under the final rule, the use of VCS is not and will not be mandatory.

As described in section V, *Comments Received on the Proposed Rule*, most commenters supported MSHA's acceptance of VCS in its approval process. Commenters, including NIOSH, Komatsu, Rosebud Mining Company, NMA, Fletcher, and Alliance Coal, agreed with MSHA that adopting VCS in Part 18 would promote the use of innovative and advanced technologies that lead to improvements in mine safety and health (Document ID 0015; 0013; 0012; 0020; 0019; 0027). MSHA agrees with these commenters.

Under final paragraph (a) of § 18.101, the VCS that the Agency incorporates by reference and determines are suitable for gassy mining environments and provide protection against fire or explosion may be used as alternatives to the requirements in subparts B through E in Part 18 if used in their entirety and without modification. Using VCS is

consistent with the principles and policies in Circular A-119. MSHA's acceptance of VCS will provide more mining product choices to mine operators and miners.

Final paragraph (b) of § 18.101 allows manufacturers to choose between the requirements in subpart B through E or the requirements of the listed VCS as the basis for approvals at all times. By contrast, the proposed rule allowed manufacturers to choose between the requirements of the last approval or the listed VCS requirements only during a limited transition period of 12 months from the effective date, after which the use of listed VCS was mandatory for new MSHA approval applications.

Several commenters, including Consol Energy, Inc. (Consol), NIOSH, and NMA, stated that the proposed 1-year transition period from Part 18 requirements to VCS for new applications should be extended (Document ID 0014; 0015; 0020). KH Controls recommended that the transition period be extended to 3 years (Document ID 0024). NIOSH suggested that MSHA consider accepting either the listed VCS or Part 18 requirements for 5 years or more for new applications, and indefinitely for modifications (Document ID 0015). NIOSH stated that the 1-year transition period to mandatory use of the listed VCS may be problematic for some manufacturers and that businesses involved in rebuilding and overhauling equipment could be harmed (Document ID 0015). NIOSH further commented that a potential issue arises when a small manufacturer needs to make changes to a product due to component obsolescence (Document ID 0015). If the changes are extensive, they may prefer to submit a new design. However, if the manufacturer already understands and builds their equipment to the Part 18 requirements, they may not have the resources or the willingness to fully transition their product engineering to the listed VCS and potentially redesign their products for such limited applications (Document ID 0015).

Consol, with agreement by NMA, expressed concern that after the 1-year transition period, some manufacturers may be forced to leave the mining market because they do not believe it is economically feasible to change-over the equipment to comply with the listed VCS (Document ID 0014; 0020). The commenter stated that there are too few manufacturers in the market already and believes that the proposed rule should be modified to permit use of the previous approval requirements after the transition period (Document ID 0014).

MSHA agrees with the commenters who stated that the mandatory transition to the VCS-only requirements could be problematic for certain manufacturers and product developers. Under the proposal, some product developers would have to rebuild and overhaul equipment to meet the listed VCS only, while other manufacturers may not have sufficient resources to transition their engineering to the listed VCS only. In response to these concerns, final paragraph (b) allows manufacturers to choose between the requirements in subparts B through E or the requirements of the listed VCS, if the listed VCS apply, as the basis for approvals starting on the effective date. Allowing both the existing Part 18 and VCS requirements eliminates the need for a mandatory transition period. Under the final rule, there is no transition period and manufacturers can decide which requirements, the requirements in subparts B through E or the requirements of the listed VCS, would best fit their business needs.

Under final paragraph (b), new applications for approval may meet either subparts B through E requirements, or the requirements of the VCS listed in § 18.102. Also, applications for a modification of an existing approval or certification may meet either subparts B through E requirements, or the requirements of the VCS listed in § 18.102.

Final paragraph (b)(2) contains non-substantive changes from the proposal. It includes the specific Group and Levels of Protection provisions, which are unchanged from proposed paragraphs 18.102(b)(2) and (b)(3). The specified Group and Levels of Protection to be used from each of the VCS listed in final paragraph 18.102 are suitable for gassy mining environments and will protect against fire or explosion hazards. MSHA has determined that the VCS which the Agency has incorporated by reference with the Group and Levels of Protection for hazardous locations designated as Group I, Zone 0, and highest Levels of Protection, "ma," "da," and "ia," listed in final paragraph (b)(2) can be used as alternatives to requirements in subparts B through E of Part 18. The Groups and Zones for hazardous locations and Levels of Protection in the VCS are explained in the following paragraphs.

Several commenters, including manufacturers, NIOSH, a safety testing laboratory, and a coal mine operator stated that the Group and Levels of Protection for the VCS proposed by MSHA should be expanded to include other Group designations and Levels of Protection in addition to hazardous

locations designated as Group I, Zone 0, and highest Levels of Protection, “ma,” “da,” and “ia” (Document ID 0005; 0011; 0013; 0015; 0017; 0024; 0025; 0027).

In the U.S., the hazardous location classification system is defined by the National Fire Protection Association® (NFPA®) 70®, NEC® (2023). The NFPA 70® NEC® Hazardous Locations Groups defines Group I as mines susceptible to firedamp (*i.e.*, flammable mixture of gases naturally occurring in a mine). Also, NFPA 70® NEC® Hazardous Locations defines Zone 0 as an area where ignitable concentrations of flammable gases or vapors are present continuously or for long periods of time (NFPA®, 2023). In each instance, the Group I mines and Zone 0 areas are designated as the most hazardous when measuring explosive atmospheres.

The “ma” designation is the highest Level of Protection against explosion protection for encapsulation (ANSI/UL, 2015b). Encapsulation of electrical equipment is a protection principle that encloses the equipment to prevent the potentially explosive atmosphere from reaching the ignition source (ANSI/UL 2015a).

The “da” designation is the highest Level of Protection for a flameproof enclosure (ANSI, 2015b). The flameproof classification is a type of protection in which the machine parts or components that can ignite in an explosive atmosphere are placed within an enclosure that can withstand the force created and pressure developed during an internal explosion (NFPA®, 2023). Therefore, if an explosion should occur inside of the enclosure, it will either be contained within, or have a flame path that will arrest the propagation of the explosion. This reduces the risk of igniting an external explosive atmosphere.

The “ia” designation offers the highest Level of Protection for intrinsic safety and is generally considered as being adequately safe for use in the most hazardous locations (Zone 0) because the possibility of two “faults” is in the safety assessment (ANSI, 2013). Intrinsic safety is an explosion protection concept in which the electrical energy within the equipment is restricted to a level which is below what may cause an ignition or to limit the heating of the surface of the hazardous area equipment (NFPA®, 2023).

Eickhoff Bergbautechnik and NIOSH both noted that the highest Levels of Protection are usually only applied to intrinsically safe methane monitors, cap lamps, and other equipment which need to be operated even in the presence of

an explosive methane atmosphere (Document ID 0011; 0015). Eickhoff Bergbautechnik also noted that a typical intrinsically safe product intended for use in underground mining has the middle Level of Protection, “ib,” and must be switched off when an explosive atmosphere arises (Document ID 0011). Matrix stated that underground coal mines do not operate continuously in Zone 0 atmospheres and noted that mines are more likely described as Zone 1 or sometimes Zone 2 (Document ID 0025).⁷ Matrix also suggested that, in addition to Zone 1, requiring middle Levels of Protection, MSHA should also include Zone 2, requiring the lowest Levels of Protection for some of the VCS.

In response to the commenters above, MSHA believes that “ma,” “da,” and “ia” Levels of Protection, which are suitable for Group I, Zone 0 hazardous areas, for the listed VCS are appropriate. MSHA has determined, based on NIOSH research, that to provide at least the same degree of protection as the existing Part 18 requirements, Group I, Zone 0 required Levels of Protection are suitable and will not result in a diminution of safety. As discussed in the proposed rule, researchers at NIOSH presented a paper to the Institute of Electrical and Electronics Engineers’ (IEEE) Industry Applications Society titled “Intrinsically Safe Systems: Equivalency of International Standards Compared to U.S. Mining Approval Criteria.”⁸ The researchers concluded that the relative Levels of Protection afforded to miners by the application of the ANSI/ISA 60079 two-fault Intrinsically Safe (IS) standard is a safe alternative to MSHA’s requirements when such electrical equipment is installed in mines.⁹ They also concluded that the use of such equipment would provide at least an equivalent level of safety as that provided by equipment approved under MSHA criteria.¹⁰ MSHA believes that Levels of Protection consistent with Zones 1 and 2 provide less protection

⁷ The NFPA 70® NEC® Hazardous Locations defines Zone 1 as a place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapor, or mist is likely to occur in normal operation occasionally (2023). Zone 2 is defined as a place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapor, or mist is not likely to occur in normal operation but, if it does occur, persists for a short period only (NFPA®, 2023).

⁸ William Calder, David P. Snyder, John F. Burr, Intrinsically Safe Systems: Equivalency of International Standards Compared to U.S. Mining Approval Criteria, DOI 10.1109/TIA.2018.2804322, IEEE Transactions on Industry Applications.

⁹ *Ibid.*

¹⁰ *Ibid.*

than the existing Part 18 requirements. Therefore, in this final rule, MSHA is allowing the use of the ANSI-approved VCS with the Group I, Zone 0 required Levels of Protection for intrinsic safety, as proposed.

Komatsu proposed extending the adoption of the 60079–1 standard for flameproof enclosures to include equipment “db,” suitable for Zone 1 (Document ID 0013). The commenter stated flameproof equipment currently approved to MSHA standards would not meet the criteria to operate in Zone 0. The commenter also stated that accepting Level of Protection “db” would not compromise safety compared to what is currently enforced. The commenter explained that 30 CFR 27.24 requires that all equipment shut down automatically at a methane concentration of 2.0 volume percent and at all higher concentrations of methane. The commenter stated that this ensures that equipment will not be operating in a Zone 0 environment with methane present for an extended period.

MSHA considered the commenter’s statement that flameproof equipment currently approved to MSHA standards would not meet the criteria to operate in Zone 0, thus allowing Level of Protection “db”; however, such flameproof enclosures are beyond the scope of this rulemaking. In 2006, MSHA evaluated a comparison of enclosures certified as flameproof under IEC 60079–0, Fourth Edition, 2004–01, and IEC 60079–1, Fifth Edition, 2003–11, versus MSHA certified and approved explosion-proof products (71 FR 28581). (See 30 CFR 6.30). MSHA determined that flameproof equipment approved to IEC 60079–0 and IEC 60079–1 “db” must be modified to provide the same Level of Protection as the MSHA flameproof equipment. This equipment must meet additional requirements such as design requirements limiting the length of an enclosure and external surface temperature limits in 30 CFR 7.10(c)(1) for motors and in 30 CFR 18.6(a)(3) for enclosures. Accordingly, MSHA is not including Levels of Protection “db” and “dc” in this rule. The Agency will consider flameproof enclosures meeting the listed VCS using the Zone 0, “da” Level of Protection as providing at least an equivalent level of safety as that provided by equipment approved under the MSHA criteria in Part 18. Level of Protection “da” is only applicable to catalytic sensors of portable combustible gas detectors (Intertek, 2020).

NIOSH stated that MSHA should consider including language in the rule that states that the middle Levels of Protection for VCS are acceptable,

subject to additional ventilation monitoring with integrated power cutoff or other supplementary safety measures acceptable to MSHA (Document ID 0015). NIOSH further recommended that the additional measures should be included in the MSHA-approved ventilation plan.

In response to NIOSH suggesting that Zone 1 Levels of Protection may be appropriate under certain circumstances, and that Zone 1 Levels of Protection for certain machinery would only be appropriate if changes to mines' ventilation plans were made and that additional conditions of use would be required for the machinery, MSHA believes that implementing NIOSH's recommendations would require changes to 30 CFR part 75 and possibly other MSHA standards, which is outside the scope of this rulemaking. Therefore, MSHA will continue to require the highest Levels of Protection, "ma," "da," and "ia" for the VCS incorporated by reference in Part 18.

Paragraph (c) of § 18.101 of the proposed rule is removed. To provide manufacturers flexibility to choose the best option for their needs, this final rule removes mandatory use of listed VCS for applicable components. As a result, paragraph (c) of § 18.101 is no longer necessary and is removed.

2. Section 18.102—Approved Voluntary Consensus Standards

Final § 18.102 incorporates by reference eight ANSI-approved VCS. MSHA determined that the VCS listed in § 18.102 are suitable for gassy mining environments and provide protection against fire or explosion hazards if used in their entirety and without modification, in lieu of the requirements in subparts B through E of this part. The non-ANSI-approved VCS in the proposal are excluded.

Final paragraphs (a)(1) through (b)(6) contain non-substantive edits to the titles of the ANSI-approved VCS and clarify that the VCS must be used in accordance with the Types of Protection and Levels of Protection in § 18.101. In this IBR section, each standard name is shown exactly as it appears on the cover of the standard.¹¹

Also, final paragraph (b) lists the name "UL Solutions" instead of "UL LLC," which was in the proposed rule. This change is made to reflect the company's name change in 2022. Proposed paragraph (b)(4) has been redesignated as final Note 1 to § 18.102 and edited for clarity from the proposal

because it only provides the public with information on obtaining copies of the listed VCS from ANSI. ANSI is an additional source for obtaining copies of the VCS in Part 18.

MSHA received multiple comments related to the use of and differences between ANSI-approved VCS and non-ANSI-approved VCS (*i.e.*, IEC VCS). Some commenters, including manufacturers, mine operators, a trade association, and a private citizen, supported MSHA's proposal to incorporate by reference both ANSI-approved and IEC VCS (Document ID 0011; 0012; 0014; 0020; 0023; 0022; 0027). Eickhoff Bergbautechnik stated that by accepting these established standards, MSHA could enhance the efficiency and effectiveness of its approval process (Document ID 0011). Rosebud Mining Company stated that many companies have equipment approved under ANSI or IEC standards that would meet the hazard rating for use in underground coal mines but currently are not able to be used in mines due to the lack of MSHA approval under 30 CFR (Document ID 0012). They also stated that, with MSHA's acceptance of the proposed VCS (both ANSI and IEC standards), a significantly larger amount of equipment and technologies would be available for use in underground mining (Document ID 0012). Consol stated that manufacturers have become increasingly reluctant to seek approval of equipment because of the cost of MSHA's approval process (Document ID 0014). The NMA stated that it is likely that devices manufactured to be intrinsically safe under both MSHA-unique standards and VCS would incur additional costs because the manufacturing process would have to accommodate both designs. These costs would be avoided if a common standard were used (Document ID 0020).

The NMA stated that Australia, New Zealand, Canada, and South Africa allow miners and mine operators to use devices and equipment not currently approved in the U.S. but that have been evaluated as safe for use in underground gassy mines in those countries using the IEC standards (Document ID 0020). NMA gave an example that miners working at operations outside the U.S. are currently using PAPRs evaluated under VCS from IEC, ANSI, UL, and ATEX, and because of this MSHA should accept IEC VCS so that U.S. miners may use these PAPRs as well (Document ID 0020).¹² Dräger stated that

its products are currently used in coal mining operations outside of the U.S., all of which recognize the proposed VCS (Document ID 0023). This commenter stated that they are unaware of a product-related incident due to any gap in the protection stipulated by the proposed VCS (Document ID 0023). Dräger further stated that, due to the nature of its products' use in mining and other hazardous applications such as firefighting, and the products' unique approval requirements, they have extensive experience with different types of explosion protection including intrinsic safety. Based on this experience, Dräger agreed that the proposed VCS would offer an equal level of safety and protection to MSHA's requirements, since the VCS undergo regular revision cycles, as well as new requirements based on technological advancements (Document ID 0023). A private citizen supported the use of the proposed VCS if the VCS are equally safe compared to existing MSHA requirements (Document ID 0022).

However, a commenter from UL, which publishes the ANSI/UL 60079 series of VCS, stated that they do not support MSHA's inclusion of non-ANSI standards, such as the IEC 60079 series (Document ID 0021). The commenter stated that the non-ANSI-approved standards under the IECEx System do not reflect key U.S. explosion safety requirements such as:

(1) The applicable requirements related to risk of fire, electric shock, and injury to persons: the IEC 60079 series permits self-declaration to these requirements, while the ANSI/UL 60079 series requires third-party declaration;

(2) Wiring methods: the IEC 60079 series permits less robust wiring methods compared to the ANSI/UL 60079 series; and

(3) Production control: the IEC 60079 series permits production control at a frequency of only every 18 months compared to the ANSI/UL 60079 series, which requires more frequent production control.

For UL's comment on non-ANSI-approved standards and their first example regarding declaration to the requirements of risk of fire, electric shock, and injury to persons, MSHA agrees that several of the IEC standards do not require third-party verification of compliance with relevant industrial standards. The ANSI versions require third-party verification of compliance,

to equipment that has gone through testing outlined by European Union (EU) directives and have been proved safe to use in specific environments with explosive atmospheres. ATEX certification ensures the free movement of goods throughout the EU by harmonizing compliance procedures.

¹¹ The Agency refers to the ANSI/UL standards in many of the regulatory text sections, but it does not do so in this IBR section.

¹² ATEX is an abbreviation from the French, atmosphere explosible (or explosive atmospheres, translated into English). ATEX certification is given

which MSHA believes is a key explosion safety requirement.

Regarding UL's second example about wiring methods, MSHA also agrees with the commenter, and found that most national differences between the ANSI/UL 60079 series and the IEC 60079 series are based on 'national regulations,' where the IEC lacks alignment with specific requirements of the National Electrical Code®, ANSI/NFPA® 70 (NEC®), which is a U.S. standard for safe electrical design, installation, and inspection to protect people and property from electrical hazards. The IEC 60079 series wiring methods does not align with NEC® requirements.

Regarding UL's third example about production control, MSHA agrees that the IECEx scheme, which uses the IEC standards, mandates quality audits every 18 months, while the OSHA NRTL program, which specifies the ANSI standards, requires "no fewer than four (4) factory surveillance visits per year at manufacturing facilities." MSHA will continue to apply the Quality Assurance requirements mandated in 30 CFR parts 6 and 18 for MSHA-approved equipment that is evaluated to the VCS.

The final rule supports the introduction of existing equipment that manufacturers have already designed to acceptable VCS without redesigning those products to meet certain MSHA-unique requirements in Part 18. The Agency also accepts testing and evaluation performed by an independent laboratory for purposes of MSHA product approval through existing regulations under § 6.10. Consequently, MSHA agrees with commenters that stated both the ANSI-approved and the non-ANSI-approved VCS offer advantages such as enhancing the efficiency and effectiveness of the approval process, as well as allowing a greater amount of equipment and technologies to be available for use in U.S. gassy mining environments. However, MSHA also agrees with UL that the non-ANSI-approved standards do not reflect certain U.S. explosion safety requirements, since the development and approval of IEC standards differ from that of ANSI standards. The 60079 series ANSI-approved standards are based on IEC-developed standards; however, unlike the IEC standards, the 60079 series ANSI-approved standards include U.S.-specific adaptations to make them compatible with U.S. safety and industry practices. The IEC standards do not completely align with U.S. electrical safety practices. ANSI-approved standards are domestic VCS that establish quality and performance

specifications for products, processes, personnel, and systems, and also typically include design and build requirements to ensure consistency of equipment from various manufacturers for specific use in the U.S.

Electrical testing and ratings between ANSI and IEC generally are not the same or equivalent. IEC equipment may not pass the equivalent ANSI test, and vice versa, due to these differences. For example, ANSI and IEC differ in their approach to temperature rise testing, with higher or lower temperature restrictions required between ANSI and the IEC standards. Another example is enclosure types that do not compare among ANSI and IEC standards. The enclosure ratings used with ANSI standards do not compare directly to Ingress Protection ratings in IEC standards.

MSHA recognizes that there can be safety and compatibility issues between ANSI-approved and non-ANSI-approved standards (BSEE, 2018). MSHA has not found such safety and compatibility issues between the existing Part 18 approval requirements and the ANSI-approved VCS included in this final rule. For instance, ANSI-approved electrical standards include general compliance with NEC® requirements, as described in the scope of the standards. The ANSI-approved standards dictate how the equipment must be installed, based on the NEC®. In comparison, installation of equipment and components meeting non-ANSI-approved IEC standards must be performed in accordance with IEC 60079–14, which is not based on the NEC®. U.S. mine electricians work with the NEC®, American Wire Gauge (AWG) sizing (the accepted standard in North America to denote electrically conducting wire sizes), and U.S. electrical system compatible components. U.S. mine electricians may not have sufficient electrotechnical knowledge and training on the non-ANSI-approved standards. However, the Part 18 approval for a machine or system will dictate the interconnection of certified components that mine electricians must follow.

Another example is that non-ANSI-approved standards use metric/European wire gauges with compatible circuit breakers, which are not the same as U.S.-based AWG wire sizing and circuit breakers. MSHA is aware that mixing different wire gauges and circuit breakers could lead to inadequate overcurrent protection and increase the risk of a mine fire or explosion (Fowler and Miles, 2009). Some ANSI-approved standards have allowable temperature rises that are higher or lower than the

non-ANSI-approved standards for different types of electrical contacts, leading to compatibility issues (Fuhrmann et al., 2014; Sim, J.H., 2007). Consequently, interconnecting components approved to ANSI-approved and non-ANSI-approved standards may create an electrical or fire hazard. A mine electrician may believe that they are connecting compatible components; however, one component could meet the testing requirements of an ANSI-approved VCS and an interconnected component could meet the testing requirements of a non-ANSI-approved VCS. In this example, it is possible for one or both of the components to fail because of issues with compatibility, causing fire, explosion, or electric shock hazards for miners.

Based on these issues, MSHA agrees with UL that the IEC standards do not consider U.S. explosion safety requirements, and thus do not provide adequate protection if used in their entirety and without modification in U.S. mining environments.

In addition, NIOSH recommended that MSHA accept the US-adopted version of the IEC standard as an alternative to the MSHA criteria for 2-fault intrinsic safety (Document ID 0015). MSHA understands NIOSH's reference to "US-adopted version of the IEC standard" to mean the ANSI 60079 series of VCS. Therefore, MSHA agrees with NIOSH that the US-adopted version of the IEC standard should be accepted as an alternative to the MSHA criteria for 2-fault intrinsic safety because it provides an equivalent Level of Protection.

In agreement with UL and NIOSH, MSHA will only accept the ANSI-approved VCS in this final rule. The list of VCS that MSHA is incorporating by reference in final paragraphs (a) and (b) of § 18.102 does not include the IEC VCS that was in the proposed rule.

MSHA received comments from manufacturers and EMA regarding other standards that the Agency should consider as a VCS for incorporation by reference (Document ID 0010; 0013; 0016; 0019; 0018; 0020; 0023). MSA Safety, a manufacturer of safety products, recommended that the gas detection performance standards, such as ANSI/UL 60079–29–1, ANSI/FM 60079–29–1, IEC 60079–29–1, and ANSI/UL 121303, be added to the VCS list in § 18.102 (Document ID 0010). Komatsu recommended that MSHA consider adopting IEC 60079–7 and UL 60079–7 (Document ID 0013). Fletcher and NMA suggested that MSHA accept ATEX certified equipment and components (Document ID 0019; 0020).

EMA requested that Factory Mutual (FM), an insurance company and testing laboratory for electrical equipment, be considered as a VCS, especially for the following testing standards: FM 3600, 3610, 3611, 3613 and 3615 (Document ID 0018).

MSHA has determined that some of these VCS, such as the gas detection performance standards in ANSI/FM 60079–29–1 and the ANSI/UL 121303 standards, are outside the scope of this final rule because the VCS are not applicable to Part 18 product approvals; they are related to 30 CFR parts 22 and 75. As discussed in section VI.D.3, *Section 18.103—Review and update of applicable voluntary consensus standards*, MSHA may consider incorporating by reference other VCS applicable to other MSHA product approval parts in future rulemakings.

MSHA analyzed IEC 60079–7 and UL 60079–7 and determined that these standards provide a Level of Protection for hazardous atmospheres encountered in gassy mines that is less protective than the Levels of Protection the Agency requires for VCS. The 60079–7 standard, “Increased Safety,” is for products in which electrical arcs and sparks do not occur in normal service (and in specific abnormal conditions) and in which surface temperatures are controlled below incandive values. Increased Safety is achieved by enhancing insulation values and creepage and clearance distances above those required for normal service, thus providing a safety factor against accidental breakdown. This protection is not as rigorous as the protection techniques that MSHA currently accepts; the enclosures are not as robust as MSHA-certified explosion-proof enclosures with circuits not considered as intrinsically safe. Furthermore, the final rule includes VCS that provide the highest level of protection (e.g., “ia”, “da”, and “ma”); Increased Safety is not one of those techniques. The Levels of Protection required by the VCS are discussed in § 18.101. TIEC 60079–7 and UL 60079–7 do not meet the Levels of Protection required by Part 18.

MSHA understands that FM is a third-party global testing and certification agency focused on property loss prevention for use in commercial and industrial facilities. FM 3600, FM 3610, FM 3611, FM 3613, and FM 3615 do not appear to address the level of protection suitable for gassy mining environments for U.S. mines. The Scope of each of these documents note that they are intended for equipment for use in “Classes I, II & III, Division 1 hazardous (classified) locations as defined in Article 500 of the NEC®.” Areas where

permissibility is required in gassy underground mines are not included in those locations.

MSHA also understands that ATEX is a mandatory directive that requires products used in hazardous atmospheres to comply with specified requirements within the European Union (Health and Safety Executive, n.d.). ATEX is intended for use in the European Union. MSHA has determined that it would not be applicable to U.S.-based product approvals because it does not address U.S. national standards.

3. Section 18.103—Review and Update of Applicable Voluntary Consensus Standards

In final § 18.103, MSHA will review more recent editions of VCS and additional VCS that could lead to the use of innovative and advanced technologies in U.S. mines. Final § 18.103 is similar to the proposed rule, with minor changes in paragraphs (a) through (c) to align with § 18.101. The language in paragraphs (a) and (b) are revised because the final rule does not replace the Part 18 requirements in subparts B through E with VCS.

Consol supported proposed § 18.103 concerning the Agency’s commitment to review, update, and possibly expand the list of VCS in § 18.102 (Document ID 0014). EMA stated that for updates of applicable VCS, MSHA should do so in a rulemaking process with notice and comment rulemaking procedures equivalent to the procedures utilized to implement the original incorporation by reference. The commenter stated that stakeholders may not have participated in the development of an updated VCS and the MSHA rulemaking procedure may be the only opportunity they have to provide input on a proposed incorporation by reference (Document ID 0018).

MSHA is aware that manufacturers of approved products currently used in mines may wish to design and manufacture products to more recent versions of MSHA-accepted VCS to keep products up-to-date for improvements and marketability. Under final paragraph (a) of § 18.103, MSHA will review more recent editions of the listed VCS and determine whether to use them to ensure timely updating of the VCS listed in § 18.102. Under final paragraph (b) of § 18.103, MSHA will review other VCS that are not listed in § 18.102 and determine whether they are suitable for gassy mining environments and provide protection against fire and explosion hazards. Under final paragraph (c) of § 18.103, MSHA will use the appropriate rulemaking process to update the list of VCS approved for

incorporation by reference in lieu of approval requirements in subparts B through E in Part 18. MSHA may also remove a standard from the list in final § 18.102 if it is withdrawn by a voluntary consensus standards body or for other reasons.

E. Conforming Amendments

Part 74—Coal Mine Dust Sampling Devices

Under the final rule, paragraph (b) of § 74.5 and paragraph (d) of § 74.11 are unchanged from the proposal. In the proposal, MSHA proposed conforming amendments to Coal Mine Dust Sampling Devices in existing part 74 based on the proposed changes in Part 18. Specifically, MSHA proposed to change cross-references in existing paragraph (b) of § 74.5 and paragraph (d) of § 74.11 for evaluation and testing for permissibility of Coal Mine Dust Sampling Devices from § 18.68 of Part 18. This change in part 74 would conform to the proposed changes in Part 18 and would allow the use of MSHA-designated VCS for the approval of coal mine dust sampling devices.

MSHA received no comments on the proposed changes. The final rule makes technical changes to 30 CFR part 74 regarding the approval requirements for Coal Mine Dust Sampling Devices to conform to the proposed changes in Part 18, which will allow the use of MSHA-designated VCS for the approval of coal mine dust sampling devices.

VII. Regulatory Impact Analysis

A. Executive Orders 12866: Regulatory Planning and Review, as Amended by E.O. 14094: Modernizing Regulatory Review, and 13563: Improving Regulation and Regulatory Review

MSHA’s Regulatory Impact Analysis assesses the costs and benefits of this final rule. Executive Order (E.O.) 12866, as amended by E.O. 14094, and E.O. 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity).¹³

¹³ Executive Order 12866 of September 30, 1993: Regulatory Planning and Review. 58 FR 51735. October 4, 1993. www.archives.gov/files/federal-register/executive-orders/pdf/12866.pdf (last accessed May 17, 2024).

Executive Order 14094 of April 6, 2023: Modernizing Regulatory Review. 88 FR 21879. April 11, 2023. www.federalregister.gov/documents/2023/04/11/2023-07760/modernizing-regulatory-review (last accessed May 17, 2024).

Under E.O. 12866, OMB's Office of Information and Regulatory Affairs (OIRA) determines whether a regulatory action is significant and, therefore, subject to the requirements of the E.O. and review by OMB. As amended by E.O. 14094, section 3(f) of E.O. 12866 defines a "significant regulatory action" as a regulatory action that is likely to result in a rule that may: (1) have an annual effect on the economy of \$200 million or more; or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, territorial, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees or loan programs or the rights and obligations of recipients thereof; or (4) raise legal or policy issues for which centralized review would meaningfully further the President's priorities or the principles set forth in the E.O. OIRA has determined that this final rule is not a "significant regulatory action." OMB has reviewed the final rule. Pursuant to Subtitle E of the Small Business Regulatory Enforcement Fairness Act of 1996, also known as the Congressional Review Act (5 U.S.C. 801 *et seq.*), OIRA has determined that this rule does not meet the criteria set forth in 5 U.S.C. 804(2) for major rules.

E.O. 13563 recognizes that some benefits and costs are difficult to quantify and provides that, where appropriate and permitted by law, agencies may consider and discuss qualitative values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts. E.O. 13563 also emphasizes the importance of reducing costs, harmonizing rules, and promoting flexibility.

This final rule incorporates by reference eight VCS, accepts those eight VCS requirements for MSHA approvals, and commits MSHA to reviewing and updating VCS provisions. The testing and evaluation of electrical equipment for which applicants seek MSHA approval for use in gassy mines is conducted by either MSHA or an independent laboratory. For new approvals, the final rule will allow applicants to use one of the following: (1) existing Part 18 requirements, or (2) listed VCS. Product designers and

manufacturers holding MSHA approvals are allowed to market such equipment to mine operators as "MSHA approved" for use in gassy mines.

The benefits of this final rule include:

(1) enhanced health and/or safety of miners through the introduction of innovative and modern electrical equipment as a result of the additional equipment and technologies that will be made available for use in U.S. gassy mining environments; and

(2) reduced burden for manufacturers applying for the approval to use electrical equipment in gassy mines, because manufacturers of equipment that already meet VCS requirements will not have to redesign those products to meet MSHA requirements.

Under MSHA's current Part 18 regulations, existing manufacturer compliance costs include:

(1) the time for manufacturers to go through an approval process, including filling out applications;

(2) the costs of testing and evaluations of equipment by MSHA or independent laboratory pursuant to 30 CFR 6.10; and

(3) fees paid by manufacturers to MSHA to have their applications reviewed.

MSHA did not receive any public comments regarding direct costs. MSHA has determined that manufacturers will not incur any new direct costs from using the final rule for product approvals.

Benefits

The final rule will provide societal benefits to manufacturers of electric motor-driven mine equipment and accessories and the consumers of those products (mine operators and miners). MSHA is not able to quantify the benefits due to a lack of access to proprietary product information and uncertainty about the type and amount of new electrical equipment that will be approved as a result of this final rule. MSHA expects that allowing for the use of VCS standards for electrical equipment will improve the safety and health of miners, through expanded product choices and lower cost burden of designing, building, and testing.

Currently, some products that use modern technologies are not being introduced by manufacturers into the U.S. mining market. One reason may be that technical requirements set by MSHA for products for gassy mines differ from those which are marketed in other industries. MSHA's specific technical requirements could influence or impact manufacturers' decisions to apply for product approvals that would allow for introduction of new technologies in U.S. mines. This final

rule promotes the introduction of additional products and technologies through the expansion of approval requirements to include VCS and lowering technical barriers to entry.

Several commenters, including Komatsu, Consol, and NIOSH, suggested that this rule will allow mine operators to take advantage of all available safety and health technologies (Document ID 0013; 0014; 0015). They also commented that this rule will allow a greater variety of electrical equipment to be introduced into gassy mines, thereby giving miners and mine operators additional equipment options, including options that might be better suited to their unique mining conditions.

Rosebud Mining Company stated that innovation in the underground coal mining sector is currently inhibited by the testing and evaluation provisions covering all equipment that must be approved under the current MSHA standards (Document ID 0012). The commenter said that many manufacturers have equipment that have been approved under ANSI or IEC standards, and that this rule would therefore expand the types of equipment allowed into gassy mines, thereby providing additional product options for mine operators and miners that would further the health and safety of miners.

The final rule will allow manufacturers to choose to use either the applicable listed VCS or MSHA's existing approval requirements in subparts B through E for Part 18 approval. This will allow manufacturers to make a choice that minimizes the time and resource costs to them while still ensuring the same level of health and safety to miners using their equipment.

In summary, MSHA expects to see two primary qualitative benefits as a result of this rule. First, the health and safety of miners will be improved because of the ability of mine operators and miners to choose from more innovative and technologically advanced equipment that works best for their unique mining conditions. Second, MSHA expects the rule to decrease the compliance burden for manufacturers through enhanced efficiency and effectiveness in the application process, because applicants will now have the option of using either existing MSHA requirements or VCS requirements for approval of their equipment.

Costs

The current regulations impose compliance costs on manufacturers of motor-driven mine electrical equipment and accessories. Manufacturers have to spend time to go through an approval

Executive Order 13563 of January 18, 2011: Improving Regulation and Regulatory Review. January 18, 2011. www.regulations.gov/document/EPA-HQ-OA-2018-0259-0005 (last accessed May 17, 2024).

process, spend money for the testing and evaluations of equipment, and pay fees to MSHA to review their applications as part of the approval process.

MSHA understands that many products with MSHA approval are also accepted for other industries with similar safety standards where VCS certification is required, such as the oil and gas extraction industry. In order to market to a wide range of industries, equipment manufacturers with MSHA approval currently have to maintain two versions of the same product: one version for the U.S. mining industry and one version for other industries with similar safety standards. Under the final rule, these manufacturers submitting new product applications for MSHA approval will likely experience lower approval costs, because their products have already met the VCS requirements and will no longer need to meet MSHA-unique requirements. As a result, many applicants will not be required to submit additional technical drawings, documentation, and testing beyond the materials submitted elsewhere for VCS certification.

The final rule allows manufacturers and mine operators to continue to sell or purchase all currently approved equipment. Currently approved equipment will still be allowed and in compliance based on its most recent approval. If, at a future date, a current approval holder wishes to make any modifications to a piece of approved equipment, the approval holder submitting an application for a modification would not incur substantive costs. Applicants will have the option of using the existing Part 18 requirements or the VCS requirements.

MSHA does not anticipate additional compliance costs for new approvals in terms of time spent on the approval process. Based on MSHA's experience providing compliance assistance to manufacturers, MSHA believes that its own standards are generally more burdensome than VCS. Manufacturers going through the VCS process can therefore expect, on average, less time to prepare application materials than they face before the adoption of this rule. Many electrical machines and components that comply with the listed VCS requirements are readily available, since VCS are widely accepted in the U.S. In contrast, many electrical machines and components that meet existing Part 18 requirements are not widely available since the requirements are specific to underground gassy mines in the U.S. Therefore, MSHA expects no extra costs associated with this final rule because many products are already

in use in markets outside of the U.S. mining industry. Furthermore, applicants whose products already meet the VCS requirements will likely experience cost reductions due to the expanded list of acceptable standards.

Applicants will still have the option of using either MSHA or an independent laboratory for testing and evaluation of their electrical equipment, which means that costs related to this item will remain unchanged. Other costs, including fees paid by manufacturers to MSHA to review their applications, are not expected to be significantly affected by the final rule.

MSHA has determined that the use of the listed VCS in addition to existing Part 18 requirements will not introduce additional direct costs for manufacturers; on the contrary, manufacturers introducing new technologies may experience fewer barriers for product entry into the mining industry, without any adverse impacts on safety. MSHA's acceptance of the listed VCS will provide more mining product choices to mine operators and miners.

Under the final rule, current approval holders will not be required to alter equipment or incur any new costs. New applicants may choose the standards most beneficial to them. Overall, no substantive costs are expected to be incurred (they are likely to fall instead) because many approval holders and applicants already design and build products that meet the VCS requirements.

VIII. Feasibility

Commenters, such as NMA and Dräger, noted that manufacturers of products for mining already successfully use VCS outside of the U.S. (Document ID 0020; 0023). The final rule will provide mining equipment manufacturers increased flexibility for approval of existing or new equipment for use in gassy mines through the allowance of the listed VCS as an alternative to the MSHA-unique requirements in Part 18. Additionally, the final rule allows manufacturers to continue to apply for approvals based on the existing MSHA-unique requirements in Part 18. Thus, the final rule does not require different technologies than those acceptable under existing requirements. MSHA concludes that the requirements of the final rule are technologically feasible.

As discussed in the Regulatory Impact Analysis, MSHA determines that manufacturers will not incur any new substantive direct costs to meet the requirements of the final rule. For approved products, manufacturers have

the option of continuing to use the requirements in subparts B through E of Part 18 or to start using listed VCS requirements. For new products, MSHA approval requires that an electrical machine or component be designed, built, and tested to existing MSHA-unique requirements in Part 18 or to the listed VCS, which results in no cost change if using existing MSHA requirements or a decrease in application costs from simplified application materials if the manufacturer chooses to meet VCS requirements. MSHA concludes that the requirements of the final rule are economically feasible.

IX. Regulatory Flexibility Act; Small Business Regulatory Enforcement Fairness Act; and Executive Order 13272

The Regulatory Flexibility Act of 1980, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996, hereafter jointly referred to as the RFA, requires that an agency consider the economic impact that a final rulemaking will have on small entities. E.O. 13272 requires Federal agencies to assess the economic impacts of a rule on small businesses, small governmental jurisdictions, and small organizations.

NIOSH and an individual noted that switching from MSHA-unique technical requirements to the listed VCS could negatively affect small to medium companies (Document ID 0015; 0026). After considering the comments, MSHA has decided to allow manufacturers to use the existing requirements or the VCS for product approval. MSHA has determined that manufacturers will not incur any incremental direct compliance costs to meet the requirements of the final rule, and no small entities that are current approval holders will be required to make a product change due to the final rule. Therefore, MSHA certifies that the final rule will not have a significant economic impact on a substantial number of small entities.

X. Paperwork Reduction Act of 1995

The Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3501–3521) provides for the Federal Government's collection, use, and dissemination of information. The goals of the PRA include minimizing paperwork and reporting burdens and ensuring the maximum possible utility from the information that is collected under 5 CFR part 1320. The PRA requires Federal agencies to obtain approval from OMB before requesting or requiring "a collection of information" from the public.

As part of the PRA process, MSHA solicited comments on the proposed rule, including information collection requirements, and provided an opportunity for comments to be sent directly to OMB, as required in 44 U.S.C. 3506(c)(2)(A). MSHA did not receive any comments regarding the necessity or burden related to information collection.

Information collection costs associated with current MSHA-unique technical requirements are captured in the currently approved information collection request under OMB Control Number 1219-0066. Under this information collection request, MSHA collects information from mine operators regarding electric motor-driven mine equipment and accessories, including the following:

- application for and extension of approval,
- application for and extension of acceptance,
- application for field modification of approved permissible equipment,
- application for and extension of certification,
- application for permit to use experimental electric face equipment in a gassy mine or tunnel,
- application for and extension of simplified certification, and
- application for Revised Approval Modification Program (RAMP).

As discussed in the Regulatory Impact Analysis, MSHA has determined that manufacturers will not incur any incremental direct costs to meet the requirements of the final rule. Hence, there is no new information collection associated with this final rule.

XI. Other Regulatory Considerations

A. National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*), requires each Federal agency to consider the environmental effects of final actions and to prepare an environmental impact statement on major actions significantly affecting the quality of the environment. MSHA has reviewed the final rule in accordance with NEPA requirements, the regulations of the Council on Environmental Quality (40 CFR part 1500), and the Department of Labor's NEPA procedures (29 CFR part 11). As a result of this review, MSHA has determined that this final rule will not have a significant environmental impact. Accordingly, MSHA has not conducted an environmental assessment nor provided an environmental impact statement.

B. The Unfunded Mandates Reform Act of 1995

MSHA has determined that this final rule does not include any Federal mandate that will result in increased expenditures by State, local, or tribal governments under the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1501 *et seq.*). Since the final rule does not have any costs, the rule is not a major rule under the Unfunded Mandates Reform Act of 1995. Accordingly, the Unfunded Mandates Reform Act of 1995 requires no further Agency action or analysis.

C. The Treasury and General Government Appropriations Act of 1999: Assessment of Federal Regulations and Policies on Families

Section 654 of the Treasury and General Government Appropriations Act of 1999 (5 U.S.C. 601 note) requires agencies to assess the impact of Agency action on family well-being. MSHA has determined that the final rule will have no effect on family stability or safety, marital commitment, parental rights and authority, or income or poverty of families and children, as defined in the Act. The final rule impacts the mining industry and does not impose requirements on states or families. Accordingly, MSHA certifies that this final rule will not impact family well-being, as defined in the Act.

D. Executive Order 13132: Federalism

The final rule does not have “federalism implications” because it will not “have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.” Accordingly, under E.O. 13132, no further Agency action or analysis is required.

E. Executive Order 12630: Government Actions and Interference With Constitutionally Protected Property Rights

The final rule does not implement a policy with takings implications. Accordingly, under E.O. 12630, no further Agency action or analysis is required.

F. Executive Order 12988: Civil Justice Reform

The final rule was written to provide a clear legal standard for affected conduct and was carefully reviewed to eliminate drafting errors and ambiguities, to minimize litigation and undue burden on the Federal court system. Accordingly, the rule meets the

applicable standards provided in section 3 of E.O. 12988, Civil Justice Reform.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This final rule does not have “tribal implications” because it will not “have substantial direct effects on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.” Accordingly, under E.O. 13175, no further Agency action or analysis is required.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

E.O. 13211 requires agencies to publish a statement of energy effects when a rule has a significant energy action that adversely affects energy supply, distribution, or use. MSHA has reviewed this final rule for its energy effects. There are no costs associated with this final rule. For the energy analysis, this final rule will not exceed the relevant criteria for adverse impact.

I. Executive Order 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government

E.O. 13985 provides “that the Federal Government should pursue a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality.” E.O. 13985 defines “equity” as “consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.” To assess the impact of the final rule on equity, MSHA considered two factors: (1) the racial/ethnic distribution in mining in NAICS 212 (which does not include oil and gas extraction) compared to the racial/ethnic distribution of the U.S. workforce (Table XI-1), and (2) the extent to which

mining may be concentrated within general mining communities (Table XI–2).

In 2008, NIOSH conducted a survey of mines, which entailed sending a survey packet to 2,321 mining operations to collect a wide range of information, including demographic information on miners. NIOSH’s 2012 report, entitled “National Survey of the Mining Population: Part I: Employees” reported the findings of this survey (NIOSH, 2012a). Race and ethnicity information about U.S. mine workers is presented in Table XI–1. Of all mine workers, including miners as well as administrative employees at mines, 93.4 percent of mine workers were white, compared to 80.6 percent of all U.S. workers.¹⁴ There were larger

percentages of American Indian or Alaska Native and Native Hawaiian or Other Pacific Islander people in the mining industry compared to all U.S. workers, while there were smaller percentages of Asian, Black or African American, and Hispanic/Latino people in the mining industry compared to all U.S. workers.

Table XI–2 shows that there are 22 mining communities, defined as counties where at least 2 percent of the population is working in the mining industry.¹⁵ Although the total population in this table represents only 0.15 percent of the U.S. population, it represents 12.0 percent of all mine workers. The average per capita income in these communities in 2020, \$47,977,¹⁶ was lower than the U.S.

average, \$59,510, representing 80.6 percent of the U.S. average. However, each county’s average per capita income varied substantially, ranging from 56.4 percent of the U.S. average to 146.8 percent.

MSHA determined that the final rule would not impose costs that would influence the mining industry’s demand of labor, and therefore, the rule would have no impact on mining employment in underserved communities. MSHA determined that the final rule is consistent with the goals of E.O. 13985 and would support the advancement of equity for all workers at mines, including those who are historically underserved and marginalized.

TABLE XI–1—RACIAL AND ETHNIC DISTRIBUTION OF MINE WORKERS ¹
[2012]

	Number of workers in mining (except oil and gas) (NAICS code 212)	As a percent of total mine workers who self-identified in these categories (latest data for 2008)	Percent of all workers in the United States for comparison (latest data 2012) ⁴
Ethnicity:			
Hispanic/Latino	26,622	12.1	15.0
Non-Hispanic or Latino	192,839	87.9	85.0
Total	219,461	100.0	100.0
Race: ²			
American Indian or Alaska Native ³	4,050	1.9	0.8
Asian	183	0.1	5.4
Black or African American	8,893	4.3	13.0
Native Hawaiian or Other Pacific Islander	634	0.3	0.2
White	194,016	93.4	80.6
Total	207,776	100.0	100.0

¹ Mine workers includes miners and other workers at mines such as administrative employees.

² Does not include mine workers who did not self-report in one of these categories. Some of the surveyed mine workers may not have self-reported in one of these categories if they are affiliated with more than one race, or if they chose not to respond to this survey question.

³ Includes mine workers who self-identified as an American Indian or Alaskan Native as a single race, not in combination with any other races. No other data on mine workers in this racial group were available from this source. In other employment statistics often reported on American Indians and Alaska Natives, their population is based on self-reporting as being American Indian or Alaska Native in combination with any other race, which has resulted in the reporting of much higher employment levels. See Bureau of Labor Statistics (BLS), *Monthly Labor Review*, “Alternative Measurements of Indian Country: Understanding Their Implications for Economic, Statistical, and Policy Analysis,” www.bls.gov/opub/mlr/2021/article/alternative-measurements-of-indian-country.htm.

⁴ More recent data from the 2020 Decennial Census were not available in September 2022.

Sources: National Institute for Occupational Safety and Health (NIOSH). 2012a. National Survey of the Mining Population Mining Publication: Part 1: Employees, DHHS (NIOSH) Pub. No. 2012–152, June 2012; U.S. Census Bureau, 2012 American Community Survey (ACS).

TABLE XI–2—MINING COUNTIES—COUNTIES IN THE UNITED STATES WITH RELATIVELY HIGH CONCENTRATIONS OF MINE WORKERS

[At least 2 percent of the county population]

No.	County	Number of mine workers (first quarter 2022)	Population of county (latest data in 2021)	Estimated percent of population who are mine workers
1	White Pine County, Nevada	1,288	9,182	14.0

¹⁴ National data on workers by race were not available for the year 2008; comparable data for 2012 are provided for comparison under the assumption that there would not be major differences in distributions between these two years.

¹⁵ Although 2 percent may appear to be a small number for identifying a mining community, one might consider that if the average household with one parent working as a miner has five members in total, then approximately 10 percent of households in the area would be directly associated with

mining. While 10 percent may also appear small, this refers to the county. There are likely particular areas that have a heavier concentration of mining households.

¹⁶ This is a simple average rather than a weighted average by population.

TABLE XI-2—MINING COUNTIES—COUNTIES IN THE UNITED STATES WITH RELATIVELY HIGH CONCENTRATIONS OF MINE WORKERS—Continued

[At least 2 percent of the county population]

No.	County	Number of mine workers (first quarter 2022)	Population of county (latest data in 2021)	Estimated percent of population who are mine workers
2	Pershing County, Nevada ...	771	6,741	11.4
3	Humboldt County, Nevada ..	1,549	17,648	8.8
4	Campbell County, Wyoming	3,547	46,401	7.6
5	Winkler County, Texas	513	7,415	6.9
6	Mercer County, North Dakota.	555	8,323	6.7
7	Chase County, Kansas	166	2,598	6.4
8	Shoshone County, Idaho	723	13,612	5.3
9	Logan County, West Virginia.	1,643	31,909	5.1
10	Sweetwater County, Wyoming.	2,050	41,614	4.9
11	Glasscock County, Texas ...	56	1,149	4.9
12	Livingston County, Kentucky	431	8,959	4.8
13	Buchanan County, Virginia	946	19,816	4.8
14	McDowell County, West Virginia.	660	18,363	3.6
15	Big Horn County, Wyoming	413	11,632	3.6
16	Sevier County, Utah	601	21,906	2.7
17	Boone County, West Virginia.	582	21,312	2.7
18	Moffat County, Colorado	349	13,185	2.6
19	Nye County, Nevada	1,062	43,946	2.4
20	Raleigh County, West Virginia.	1,647	73,771	2.2
21	Wyoming County, West Virginia.	456	21,051	2.2
22	Elko County, Nevada	1,090	53,915	2.0
Total	.....	20,963	494,448	4.2
All U.S. Counties.	.....	174,387	331,893,745	.....
Mine Workers in Mining Counties as a Percent of All U.S. Mine Workers.	.....	12.0%		
Population of Mine Counties as a Percent of U.S. Population.	.....		0.15%	

Source: BLS, Quarterly Employment and Wages First Quarter 2022 (2022); Bureau of Economic Analysis, Personal Income by County, Metro, and Other Areas 2020 (2020); U.S. Census Bureau, "Annual Estimates of the Resident Population for Counties: April 1, 2020 to July 1, 2021 (CO-EST2021-POP)." available at: www.census.gov/data/tables/time-series/demo/popest/2020s-counties-total.html (last accessed Jan. 11, 2024); U.S. Census Bureau, Quick Facts, available at: www.census.gov/quickfacts/fact/table/US/PST045221 (last accessed Jan. 11, 2024).

J. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), this final rule is not a "major rule," as defined by 5 U.S.C. 804(2).

K. Pay-As-You-Go-Act of 2023

In accordance with the Administrative Pay-As-You-Go Act of 2023 (Fiscal Responsibility Act of 2023, Pub. L. 118-5, div.B, title III) and OMB Memorandum (M-23-21) dated September 1, 2023, MSHA has

determined that this final rule is exempt from the Act because this rule only affects discretionary funding. Therefore, no further Agency action or analysis is required.

L. Incorporation by Reference

The Office of the Federal Register (OFR) has regulations concerning incorporation by reference. In accordance with the OFR's requirements (1 CFR part 51), the following discussion summarizes briefly the VCS

that MSHA incorporates by reference and the availability of each VCS.

International Society of Automation (ISA)

The two ISA standards being incorporated by reference in this final rule are summarized in this section below. ISA provides free online public access to view read-only copies of ISA standards that are incorporated into Federal regulations through an agreement with ANSI. These standards

are available to the public for free viewing online in the ANSI Incorporated by Reference Portal website at: <https://ibr.ansi.org/Standards/isa.aspx>. In addition to the free online availability of these standards for viewing on the ANSI website, hardcopies and printable versions are available for purchase from ISA. The ISA website address to purchase standards is: www.isa.org/standards-and-publications/isa-standards/find-isa-standards-in-numerical-order. Interested persons may also contact ISA directly at International Society of Automation (ISA), 67 T.W. Alexander Drive, P.O. Box 12277, Research Triangle Park, NC 27709, Tel: (919) 549-8411. In addition, upon finalization of this rule, ISA standards will be available for review free of charge at MSHA headquarters at 201 12th Street South, Arlington, VA 22202-5450 (202-693-9440) and at MSHA's Approval and Certification Center (A&CC) at 765 Technology Drive, Triadelphia, WV 26059 (304-547-0400).

ANSI/ISA 60079-11 (12.02.01)—2014 Standard for Explosive Atmospheres—Part 11: Equipment Protection by Intrinsic Safety “i” (Group I, Level of Protection ‘ia’), dated March 28, 2014, specifies the construction and testing of intrinsically safe apparatus intended for use in an explosive atmosphere and for associated apparatus that is intended for connection to intrinsically safe circuits which enter such atmospheres. This standard is also applicable to electrical equipment or parts of electrical equipment located outside the explosive atmosphere or protected where the intrinsic safety of the electrical circuits in the explosive atmosphere may depend upon the design and construction of such electrical equipment or parts of such electrical equipment. The electrical circuits exposed to the explosive atmosphere are evaluated for use in such an atmosphere by applying this standard.

ANSI/ISA 60079-25 (12.02.05)—2011 Standard for Explosive Atmospheres—Part 25: Intrinsically Safe Electrical Systems (Group I, Level of Protection ‘ia’), dated December 2, 2011, contains the specific requirements for construction and assessment of intrinsically safe electrical systems, type of protection “i,” intended for use, as a whole or in part, in Class I, Zone 0, 1, or 2, or Zone 20, 21, or 22 hazardous (classified) locations as defined by the NEC®, ANSI/NFPA 70®.

UL

The six UL standards being incorporated by reference in this final rule are summarized in this section

below. UL provides free online public access to view read-only copies of UL standards that are incorporated into Federal regulations. These standards are available to the public for free viewing online on UL's website at: www.ulstandards.com/IBR/logon.aspx. In addition to the free online availability of these standards for viewing on UL's website, hardcopies and printable versions are available for purchase from UL. The UL website address to purchase standards is:

www.shopulstandards.com. Interested persons may also contact UL directly at UL Solutions, Comm 2000, 151 Eastern Avenue, Bensenville, IL 60106, Tel: (888) 853-3503. In addition, upon finalization of this rule, UL standards will be available for review free of charge at MSHA headquarters at 201 12th Street South, Arlington, VA 22202-5450 (202-693-9440) and at MSHA's A&CC at 765 Technology Drive, Triadelphia, WV 26059 (304-547-0400).

ANSI/UL 60079-0 Ed. 7-2019, Standard for Explosive Atmospheres—Part 0: Equipment-General Requirements (Group I), dated March 26, 2019, specifies the general requirements for construction, testing and marking of Ex Equipment and Ex Components intended for use in explosive atmospheres. This standard is an adoption of IEC 60079-0, Explosive atmospheres—Part 0: Equipment—General requirements, (seventh edition issued by IEC December 2017) as a new IEC-based UL standard with U.S. national differences.

ANSI/UL 60079-1 Ed. 7-2015, Standard for Explosive Atmospheres—Part 1: Equipment Protection by Flameproof Enclosures “d” (Group I, Level of Protection ‘da’), dated September 18, 2015, contains specific requirements for the construction and testing of electrical equipment with the type of protection flameproof enclosure “d”, intended for use in explosive gas atmospheres. This standard is an adoption of IEC 60079-1, Explosive Atmospheres—Part 1: Equipment Protection by Flameproof Enclosures “d” (seventh edition, issued June 2014) with U.S. national differences.

ANSI/UL 60079-11 Ed. 6-2013, Standard for Explosive Atmospheres—Part 11: Equipment Protection by Intrinsic Safety “i” (Group I, Level of Protection ‘ia’), dated February 15, 2013, specifies the construction and testing of intrinsically safe apparatus intended for use in an explosive atmosphere and for associated apparatus, which is intended for connection to intrinsically safe circuits which enter such atmospheres. This standard is also applicable to electrical equipment or parts of

electrical equipment located outside the explosive atmosphere or protected where the intrinsic safety of the electrical circuits in the explosive atmosphere may depend upon the design and construction of such electrical equipment or parts of such electrical equipment. The electrical circuits exposed to the explosive atmosphere are evaluated for use in such an atmosphere by applying this standard. This standard incorporates all of the U.S. national differences for UL 60079-11 and is based on IEC 60079-11, Edition 6, published in 2011.

ANSI/UL 60079-18, Ed. 4-2015, Standard for Explosive Atmospheres—Part 18: Equipment Protection by Encapsulation “m” (Group I, Level of Protection ‘ma’), dated December 14, 2015, provides the specific requirements for the construction, testing and marking of electrical equipment, parts of electrical equipment and Ex components with the type of protection encapsulation “m” intended for use in explosive gas atmospheres or explosive dust atmospheres. This standard applies only for encapsulated electrical equipment, encapsulated parts of electrical equipment, and encapsulated Ex components where the rated voltage does not exceed 11 kV. This standard incorporates all of the U.S. national differences and is based on IEC 60079-18, Explosive Atmospheres—Part 18: Equipment Protection by Encapsulation “m”, (fourth edition issued December 2014).

ANSI/UL 60079-25 Ed. 2-2011, Standard for Explosive Atmospheres—Part 25: Intrinsically Safe Electrical Systems (Group I, Level of Protection ‘ia’), dated December 2, 2011, contains the specific requirements for construction and assessment of intrinsically safe electrical systems, type of protection “i,” intended for use, as a whole or in part, in Class I, Zone 0, 1, or 2 hazardous (classified) locations as defined by the NEC®, ANSI/NFPA 70®. This standard is an adoption of ANSI/ISA 60079-25, Standard for Explosive Atmospheres—Part 25: Intrinsically Safe Electrical Systems.

ANSI/UL 60079-28 Ed. 2-2017, Standard for Explosive Atmospheres—Part 28: Protection of Equipment and Transmission Systems Using Optical Radiation (Group I, Equipment Protection Level ‘Ma’), dated September 15, 2017, specifies the requirements, testing and marking of equipment emitting optical radiation intended for use in explosive atmospheres. It also covers equipment located outside the explosive atmosphere or protected, but which generates optical radiation that is intended to enter an explosive

atmosphere. This standard incorporates all of the U.S. national differences for UL 60079–28 and is based on IEC 60079–28, Edition 2.0 published May 2015.

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List of Subjects

30 CFR Part 18

Incorporation by reference, Mine safety and health, Reporting and recordkeeping requirements.

30 CFR Part 74

Mine safety and health, Occupational safety and health.

Christopher J. Williamson,

Assistant Secretary of Labor for Mine Safety and Health.

For the reasons set out in the preamble, and under the authority of the Federal Mine Safety and Health Act of 1977, as amended, the Mine Safety and Health Administration amends chapter I of title 30 of the Code of Federal Regulations as follows:

PART 18—ELECTRIC MOTOR-DRIVEN MINE EQUIPMENT AND ACCESSORIES

■ 1. The authority citation for part 18 continues to read as follows:

Authority: 30 U.S.C. 957, 961.

■ 2. Amend § 18.2 by:

■ a. Revising the definition for “Permissible equipment”; and

■ b. Adding in alphabetical order the definitions for “Voluntary consensus standard” and “Voluntary consensus standards body”.

The revision and additions read as follows:

§ 18.2 Definitions.

* * * * *

Permissible equipment means a completely assembled electrical machine or accessory for which an approval has been issued.

* * * * *

Voluntary consensus standard means a safety standard that:

(1) Is developed or adopted by a voluntary consensus standards body; and

(2) Prescribes safety requirements applicable to equipment for which applicants are seeking approval, certification, extension, or acceptance under this part.

Voluntary consensus standards body means a domestic or international organization that plans, develops, establishes, or coordinates voluntary consensus standards using agreed-upon procedures that are consistent with the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 3710) and the Office of Management and Budget’s Circular A–119 (Jan. 27, 2016).

§ 18.6 [Amended]

■ 3. Amend § 18.6 by removing the third sentence in paragraph (e).

■ 4. Amend § 18.15 by revising paragraph (c) to read as follows:

§ 18.15 Changes after approval or certification.

* * * * *

(c) An application for a formal extension of approval or certification must have a list of new or revised drawings, specifications, and information related to the changes to be added to those already on file for the original approval or certification. MSHA will issue a formal extension of approval or certification to a completely assembled electrical machine or accessory, if each component of such electrical machine or accessory:

(1) Meets the requirements in subparts B through E of this part; or

(2) Meets the requirements in approved voluntary consensus standards (see § 18.101).

* * * * *

■ 5. Add subpart F, consisting of §§ 18.101 through 18.103, to read as follows:

Subpart F—Voluntary Consensus Standards

Sec.

18.101 Acceptance and use of voluntary consensus standards.

18.102 Approved voluntary consensus standards.

18.103 Review and update of applicable voluntary consensus standards.

§ 18.101 Acceptance and use of voluntary consensus standards.

(a) Voluntary consensus standards that are suitable for gassy mining environments and that provide protection against fire or explosion, if used in their entirety and without modification, may be used in lieu of the requirements in subparts B through E of this part, if MSHA has incorporated those standards by reference.

(b) For applications submitted on or after January 9, 2025, an approval will be issued in accordance with subpart A of this part for a completely assembled electrical machine or accessory, if each component of such electrical machine or accessory:

(1) Meets the requirements in subparts B through E of this part; or

(2) Meets the Group I requirements in the following voluntary consensus standards (incorporated by reference, see § 18.102), as well as the associated Level of Protection, if specified, that apply to those components:

(i) ANSI/ISA 60079–11 (Level of Protection ‘ia’);

(ii) ANSI/ISA 60079–25 (Level of Protection ‘ia’);

(iii) ANSI/UL 60079–0;

(iv) ANSI/UL 60079–1 (Level of Protection ‘da’);

(v) ANSI/UL 60079–11 (Level of Protection ‘ia’);

(vi) ANSI/UL 60079–18 (Level of Protection ‘ma’);

(vii) ANSI/UL 60079–25 (Level of Protection ‘ia’); and

(viii) ANSI/UL 60079–28 (Equipment Protection Level ‘Ma’).

§ 18.102 Approved (incorporated by reference) voluntary consensus standards.

Certain material is incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved incorporation by reference (IBR) material is available for inspection at U.S. Department of

Labor, Mine Safety and Health Administration (MSHA) and at the National Archives and Records Administration (NARA). Contact MSHA at: 765 Technology Drive, Triadelphia, WV 26059, phone: (304) 547–0400; www.msha.gov/compliance-and-enforcement/equipment-approval-certification. For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov. The material is available as follows:

(a) International Society of Automation (ISA), 67 T.W. Alexander Drive, P.O. Box 12277, Research Triangle Park, NC 27709; phone: (919) 549–8411; website: www.isa.org.

(1) ANSI/ISA 60079–11 (12.02.01)-2014, American National Standard for Explosive Atmospheres—Part 11: Equipment protection by intrinsic safety “i”, Edition 6.2, Approved March 28, 2014; into § 18.101

(2) ANSI/ISA 60079–25 (12.02.05)-2011, American National Standard for Explosive Atmospheres—Part 25: Intrinsically safe electrical systems, Approved December 2, 2011; into § 18.101.

(b) UL Solutions, Comm 2000, 151 Eastern Avenue, Bensenville, IL 60106; phone: (888) 853–3503; website: www.ul.com.

(1) UL 60079–0, Standard for Safety for Explosive Atmospheres—Part 0: Equipment—General Requirements, Seventh Edition, Dated March 26, 2019, including revisions through April 15, 2020 (ANSI/UL 60079–0); into § 18.101.

(2) UL 60079–1, Standard for Safety for Explosive Atmospheres—Part 1: Equipment Protection by Flameproof Enclosures “d”, Seventh Edition, Dated September 18, 2015, including revisions through January 23, 2020 (ANSI/UL 60079–1); into § 18.101.

(3) UL 60079–11, Standard for Safety for Explosive Atmospheres—Part 11: Equipment Protection by Intrinsic Safety “i”, Sixth Edition, Dated February 15, 2013, including revisions through September 14, 2018 (ANSI/UL 60079–11); into § 18.101.

(4) UL 60079–18, Standard for Safety for Explosive Atmospheres—Part 18: Equipment Protection by Encapsulation “m”, Fourth Edition, Dated December 14, 2015, including revisions through February 7, 2019 (ANSI/UL 60079–18); into § 18.101.

(5) UL 60079–25, Standard for Safety for Explosive Atmospheres—Part 25: Intrinsically Safe Electrical Systems, Second Edition, Dated December 2, 2011, including revisions through June 12, 2020 (ANSI/UL 60079–25); into § 18.101.

(6) UL 60079–28, Standard for Safety for Explosive Atmospheres—Part 28: Protection of Equipment and Transmission Systems Using Optical Radiation, Second Edition, Dated September 15, 2017, including revisions through December 7, 2021 (ANSI/UL 60079–28); into § 18.101.

Note 1 to § 18.102: The voluntary consensus standards listed in this section may also be obtained from the American National Standards Institute (ANSI), 1899 L Street NW, 11th Floor, Washington, DC 20036, phone: (202) 293–8020; website: www.ansi.org.

§ 18.103 Review and update of applicable voluntary consensus standards.

(a) MSHA will review more recent editions of voluntary consensus standards listed in § 18.102 to determine whether they can be used in their entirety and without modification, in lieu of the requirements in subparts B through E of this part.

(b) MSHA may review voluntary consensus standards not approved for incorporation by reference (IBR) in § 18.102 to determine whether such standards are suitable for gassy mining environments and whether they provide protection against fire or explosion, if substituted in their entirety and without modification, in lieu of the requirements in subparts B through E of this part.

(c) Following such review and determination, MSHA will use the appropriate rulemaking process to amend the list of voluntary consensus standards approved for IBR in lieu of the requirements in subparts B through E of this part.

PART 740—COAL MINE DUST SAMPLING DEVICES

■ 6. The authority citation for part 74 continues to read as follows:

Authority: 30 U.S.C. 957.

§§ 74.5 and 74.11 [Amended]

■ 7. In §§ 74.5(b) and 74.11(d), remove “30 CFR 18.68” and add in its place the term “30 CFR part 18.”

[FR Doc. 2024–28315 Filed 12–9–24; 8:45 am]

BILLING CODE 4520–43–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52, 75, 78, and 97

[EPA–HQ–OAR–2021–0668; FRL–8670.5–02–OAR]

RIN 2060–AW47

Federal “Good Neighbor Plan” for the 2015 Ozone National Ambient Air Quality Standards; Notice on Remand of the Record of the Good Neighbor Plan To Respond to Certain Comments

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice; supplemental response to comments.

SUMMARY: The Environmental Protection Agency (EPA) is addressing certain comments that were submitted on the proposed Good Neighbor Plan that the Supreme Court of the United States concluded the EPA had likely not sufficiently addressed in the final Good Neighbor Plan. The EPA is providing a fuller explanation of its reasoning at the time of its action in response to these comments. The Good Neighbor Plan addressed 23 states’ obligations to eliminate significant contribution to nonattainment or interference with maintenance of the 2015 ozone national ambient air quality standards (NAAQS), pursuant to the “good neighbor” provision of the Clean Air Act (CAA or Act). On September 12, 2024, the D.C. Circuit Court of Appeals remanded the record of the Good Neighbor Plan to the EPA to permit the Agency to further respond to comments related to the Good Neighbor Plan’s operation if one or more upwind States were no longer participating. In this document, the EPA responds to the comments by more fully explaining why the Good Neighbor Plan appropriately defines each state’s obligations, regardless of the status of the rule in other states, and can be implemented without modification in any individual state or combination of states covered by the rule.

DATES: December 10, 2024.

ADDRESSES: The EPA has established a docket for this document under Docket ID No. EPA–HQ–OAR–2021–0668. All documents in the docket are listed on the <https://www.regulations.gov> website. Although listed in the index, some information is not publicly available, e.g., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form.

Publicly available docket materials are available electronically through <https://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Gwyndolyn Sofka, OAQPS–AQPDP (C541–04), Environmental Protection Agency, 109 TW Alexander Dr, Research Triangle Park, NC 27711; telephone number: (919)–541–5121; email address: sofka.gwyndolyn@epa.gov.

SUPPLEMENTARY INFORMATION:

Throughout this document “we,” “us,” and “our” refer to the EPA.

I. General Information

The EPA is responding to a set of comments that together raise a question regarding the method by which the Agency developed the Good Neighbor Plan (88 FR 36654; June 5, 2023). Namely: would the conclusions the EPA reached regarding states’ obligations under CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS have been different, had the rule been promulgated for, or if it covered, a smaller or different group of states than the 23 states that were included in that the rule? In short, for reasons that are provided in the record of the Good Neighbor Plan itself and elaborated upon in this document, the answer to that question is no. The EPA applied its 4-step interstate transport analytical framework in the Good Neighbor Plan to determine each included state’s obligations. That framework, which accounts for the multistate “collective contribution” nature of ozone problems throughout the United States, nonetheless defines the amount of emissions from each state that constitutes “significant contribution to nonattainment or interference with maintenance” of the NAAQS in other states and implements programs to prohibit those emissions through federal implementation plans (FIPs) promulgated for each state accordingly. As the Good Neighbor Plan itself indicated, the EPA’s methodology is designed to be applicable in any state that may become subject to a federal plan to address its “significant contribution” to other states’ ozone problems for the 2015 ozone NAAQS; it provides an equitable and efficient solution to a “thorny causation problem,” *EME Homer City*, 572 U.S. 489, 514 (2014), by holding any linked state’s largest industrial NO_x-emitting sources to widely achievable emissions levels, and ensures fairness among states by not being dependent on the order in which they are addressed.

By issuing this document, the Agency is addressing a particular issue that the