

# PUBLIC SUBMISSION

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Testing, Evaluation, and Approval of Electric Motor-Driven Mine Equipment and Accessories.  
(PARTS 18 & 74)

**Comment On:** MSHA-2020-0018-0008

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

**Document:** MSHA-2020-0018-0009

Comment from Jomar Cabilin, Organization of Lima Safety Officer

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## General Comment

See attached file(s)

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## Attachments

2020-22589

AB93-COMM-2



4520.43-P

## 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, Labor.

**ACTION:** Proposed rule; request for comments.

**SUMMARY:** The Mine Safety and Health Administration (MSHA) proposes to revise its regulations that sets out the testing, evaluation, and approval requirements for electric motor-driven mine equipment and accessories intended for use in gassy mines. Under this proposal, MSHA will accept voluntary consensus standards (VCS) that are suitable for gassy mining environments and that provide protection against fire or explosion dangers, to replace approval requirements in its regulations. This proposal is intended to promote the use of innovative and advanced technologies that lead to improvements in mine safety and health and to improve the efficiency and effectiveness of MSHA's approval process.

**DATES:** *Comment date:* Comments must be received or postmarked by midnight Eastern Daylight Savings Time on [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** Submit comments and informational materials, identified by RIN 1219-AB93 or Docket No. MSHA- 2020-0018, by one of the following methods:

- *Federal E-Rulemaking Portal:* <http://www.regulations.gov>. Follow the online instructions for submitting comments.
- *Email:* [zzMSHA-comments@dol.gov](mailto:zzMSHA-comments@dol.gov). Include RIN 1219–AB93 or Docket No. MSHA-2020-0018 in the subject line of the message.
- *Mail:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202–5452.
- *Hand Delivery or Courier:* MSHA, 201 12th Street South, Suite 4E401, Arlington, Virginia, between 9:00 a.m. and 5:00 p.m. Monday through Friday, except Federal holidays. Sign in at the receptionist’s desk on the 4th Floor East.
- *Fax:* (202) 693-9441.

*Instructions:* All submissions must include RIN 1219-AB93 or Docket No. MSHA-2020-0018. Do not include personal information that you do not want publicly disclosed; MSHA will post all comments without change, including any personal information provided, to <http://www.regulations.gov> and on MSHA’s Web site at <https://www.msha.gov/regulations/rulemaking>.

*Docket:* For access to the docket to read comments received, go to <http://www.regulations.gov> or <http://www.msha.gov/currentcomments.asp>. To read background documents, go to <http://www.regulations.gov>. Review comments and background documents in person at the Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452. Sign in at the receptionist’s desk on the 4th floor East, Suite 4E401.

*Email Notification:* To subscribe to receive email notification when MSHA publishes rulemaking documents in the Federal Register, go to <https://public.govdelivery.com/accounts/USDOL/subscriber/new>.

**FOR FURTHER INFORMATION CONTACT:** Roslyn B. Fontaine, Deputy Director, Office of Standards, Regulations, and Variances, MSHA, at [fontaine.roslyn@dol.gov](mailto:fontaine.roslyn@dol.gov) (email), (202) 693-9440 (voice); or (202) 693-9441 (facsimile). These are not toll-free numbers.

**SUPPLEMENTARY INFORMATION:**

**I. Background**

The Federal Mine Safety and Health Act of 1977 (30 U.S.C. 801) (Mine Act) requires the Mine Safety and Health Administration (MSHA) to establish requirements for the technical design, construction, and testing of electrical products that must be approved by MSHA prior to use in gassy mines. These regulations are divided into separate parts based on equipment type. Title 30 CFR part 18 (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.<sup>1</sup> Examples of this equipment include portable two-way radios, 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). MSHA approves, as “permissible,” completely assembled electrical equipment, components of electrical equipment, and electrical accessories that manufacturers design, construct, and install to meet MSHA’s requirements.

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<sup>1</sup> 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.

Requirements in part 18, including associated tests, are to ensure that such equipment will not cause a fire or explosion (30 CFR 18.4). Applicants must design electrical equipment so that it will not cause a fire or explosion, using at least one of two recognized methods. One way is to design equipment so that it cannot produce a spark strong enough, or temperatures sufficient, to ignite a hazardous gas such as flammable methane-air mixtures. Alternatively, applicants may house the equipment in enclosures that will withstand internal explosions of methane-air mixtures without damage to, or excessive distortion of, its walls or covers, and without ignition of surrounding methane-air mixtures or discharge of flame from inside to outside the enclosure.

Before electric motor-driven equipment or accessories can be used in gassy mines in the U.S., they must first have been approved for such use by MSHA. Those seeking MSHA approval (applicants) are typically product designers and manufacturers of the equipment or accessories. MSHA's approval process includes testing and evaluation of the products, either by MSHA or by an independent laboratory. Applicants that use an independent laboratory to conduct testing or evaluation must submit the results to MSHA for review, along with written evidence of the laboratory's independence and current recognition by a laboratory accrediting organization.

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 steps. First, MSHA examines the documents in the application to determine whether the applicant has met the technical requirements of the provisions of part 18. MSHA also checks each drawing and specification in the application against these requirements and, for some products, samples of the product or parts of the product. MSHA may disassemble and examine

parts of the product for conformity to the drawings and specifications. Second, after MSHA verifies that an applicant's product complies with the design and construction requirements, MSHA tests the product to determine whether it performs according to the approval requirements. MSHA issues an approval if the product passes the tests and meets all of MSHA's technical and safety requirements.

Once a product is approved, the applicant becomes an approval holder and must place an MSHA approval marking on the product to indicate that the product is approved for use in gassy mines.

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

## **II. Regulatory Review and Reform Comments**

In 2018, the Agency announced its intent to review existing regulations to assess compliance costs and reduce regulatory burden. As part of this review, MSHA sought stakeholders' assistance in identifying those regulations that could be repealed, replaced, or modified without reducing miners' safety or health. MSHA published on its website (<https://www.msha.gov/provide-or-view-comments-msha-regulations-repeal-replace-or-modify>) a notice that the Agency is seeking assistance in identifying regulations for review. All comments are posted on the Agency's website.

As a result of this solicitation, MSHA received a number of recommendations regarding MSHA's product approval regulations. One commenter recommended that MSHA replace part 18 with a modified set of regulations to provide a clearer and timelier path for approval of new technologies that will improve the health and safety of miners. The commenter noted that many products approved for use under international consensus standards in other countries could not be approved for use by MSHA under part 18. The commenter stated that international coal companies outside the United States may use products designed and manufactured to these international consensus standards, and thus may have access to the latest health and safety technology in their mining operations.

MSHA acknowledges the benefits of using VCS and proposes that VCS replace existing MSHA requirements as discussed below.

Two commenters suggested that MSHA adopt the International Electrotechnical Commission (IEC) 60079 standards for use in approvals of electrical mining equipment, including methane detectors. These IEC standards address the safety of equipment used in explosive gaseous atmospheres. One commenter stated that the IEC series of standards has been adopted by many other countries for use in approving electrical mining equipment for use in explosive atmospheres. For example, Australia uses the IEC 60079 standards with national deviations that are called the ANZEx 60079 standards. For approvals issued under part 18, MSHA agrees and is proposing to adopt VCS that provide protection against fire and explosion dangers.

One commenter suggested that MSHA provide clearly-defined requirements in part 18 for equipment approvals and certifications based on standards that are maintained and updated by industry experts and technical committees. The commenter stated that regularly updating the

standards would improve the safety of electrical mining equipment and that allowing the standards to keep pace with technology (through more recent versions of the standards) would improve the safety and health of miners in the U.S.

MSHA agrees with these comments and would use the appropriate rulemaking process with solicitation of public comment to adopt VCS developed by standard-setting bodies that plan, develop, establish, or coordinate standards through agreed-upon, transparent, and deliberate procedures. MSHA further agrees that continuing to adopt VCS as they are maintained and updated through the agreed-upon, transparent, and deliberate procedures, can promote the availability of technologically advanced equipment for use in U.S. mines, thus improving mine safety and health.

### **III. Discussion of Proposed Rule**

#### *A. Voluntary Consensus Standards*

MSHA proposes to incorporate by reference 14 VCS—8 American National Standards Institute (ANSI) approved and 6 IEC approved—in their entirety and without modification, to replace existing approval criteria in part 18 for products covered by the incorporated VCS.<sup>2</sup> MSHA has determined that these VCS (1) are suitable for gassy mining environments and (2) will provide protection against fire or explosion dangers, if substituted in their entirety for MSHA approval requirements specified in part 18, subparts B through E. The existing MSHA subparts B through E requirements would continue to apply to those electrical components not covered by one of the 14 VCS.

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<sup>2</sup> MSHA has participated on Technical Advisory Groups to the U.S. National Committee (USNC) of the IEC for the past several years. The USNC of the IEC is an integrated body of ANSI. MSHA staff have provided comments on proposed changes to IEC standards for electrical equipment for use in hazardous locations. This includes standards for intrinsic safety, flameproof enclosures, and encapsulated assemblies.



Table 1 below lists the U.S. and international VCS that MSHA proposes to incorporate by reference in part 18. As discussed below in the section-by-section analysis, the ANSI standards are based on the similarly-numbered IEC standards. The ANSI and IEC standards on particular topics are generally similar but not identical, as the ANSI standards include modifications of the IEC standards and U.S.-specific requirements (U.S. deviations). IEC standards are prepared and maintained by subject matter experts, using a rigorous and well-defined process. Similarly, the U.S. deviations are developed by nationally-recognized and vetted experts and are approved as American National Standards only if the appropriate procedures are followed.

MSHA believes this approach would promote in U.S. mines the availability of technologically advanced equipment that protects miners against the risk of fire or explosion dangers. Many products conforming to these VCS are broadly recognized across various industries and in other countries as providing an appropriate level of safety for miners and others in work environments with hazards similar to those encountered in the mining industry. The proposed changes would allow the introduction of products that further mine safety but that MSHA could not otherwise approve because they do not conform to the existing requirements in part 18.

This proposal is also consistent with the Office of Management and Budget's (OMB) Circular A-119 (Jan. 27, 2016 (81 FR 4673)), which establishes policy guidance for Federal agencies. Circular A-119, based on the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 3701 et seq.) (Transfer Act), section 12(d), directs Federal agencies to use technical standards developed or adopted by VCS bodies to carry out policies or activities. Additionally, Circular A-119 directs agencies to use VCS in lieu of government-unique

standards, except where inconsistent with law or otherwise impractical. The intent of the policy guidance in Circular A-119 is to minimize agency reliance on government-unique standards to decrease the burden of complying with agency regulations and promote efficiency and economic competition through harmonization of standards. (See <https://www.whitehouse.gov/wp-content/uploads/2017/11/Circular-119-1.pdf>). Consistent with Circular A-119, the use of VCS would streamline the MSHA approval process and make it more effective and efficient for applicants by decreasing the reliance on government-unique standards.

While this proposal lists 14 VCS for MSHA to incorporate by reference, the Agency is interested in whether the proposal should be expanded to include other VCS. Please provide rationale, with definitive data and explanation of how this would improve safety, for your position.

The VCS are summarized in the discussion related to § 18.102.

**Table 1**

<b>Voluntary Consensus Standards</b>
ANSI/UL 60079-0 Ed. 7, Explosive Atmospheres - Part 0: Equipment-General Requirements (Group I) (2019). This standard provides the general requirements for the construction, testing, and marking of electrical equipment intended for use in explosive atmospheres.
ANSI/UL 60079-1 Ed. 7, Standard for Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures “d” (Group I, Level of Protection ‘da’) (2015). This standard contains specific requirements for the construction and testing of electrical equipment, with the Type of Protection flameproof (FP) enclosure designated “d” intended for use in explosive gas atmospheres.

ANSI/ISA 60079-11<sup>1</sup> (12.02.01)-2014 Standard for Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety “i” (Group I, Level of Protection ‘ia’) (2014). This standard 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 that may enter such atmospheres. This type of protection is applicable to electrical equipment in which the electrical circuits themselves are incapable of causing an explosion in the surrounding explosive atmospheres.

ANSI/UL 60079-11<sup>1</sup> Ed. 6, Standard for Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety “i” (Group I, Level of Protection ‘ia’) (2013). This standard 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 that may enter such atmospheres. This type of protection is applicable to electrical equipment in which the electrical circuits themselves are incapable of causing an explosion in the surrounding explosive atmospheres.

ANSI/UL 60079-18, Ed. 4, Standard for Explosive Atmospheres - Part 18: Equipment Protection by Encapsulation ‘m’ (Group I, Level of Protection ‘ma’) (2015). This standard provides the specific requirements for the construction, testing, and marking of electrical equipment, parts of electrical equipment, and components not intended to be used alone, with the Type of Protection encapsulation “m” intended for use in explosive gas atmospheres or explosive dust atmospheres.

ANSI/ISA 60079-25<sup>1</sup> (12.02.05)-2011 Standard for Explosive Atmospheres - Part 25: Intrinsically Safe Electrical Systems (Group I, Level of Protection ‘ia’) (2011). This standard contains the specific requirements for construction and assessment of intrinsically safe electrical systems, intended for use, as a whole or in part, in hazardous locations. A system approved under this standard is comprised of equipment or components approved to the 60079-11 standard, interconnected to form a system.

ANSI/UL 60079-25<sup>1</sup> Ed. 2, Standard for Explosive Atmospheres - Part 25: Intrinsically Safe Electrical Systems (Group I, Level of Protection ‘ia’) (2011). This standard contains the specific requirements for construction and assessment of intrinsically safe electrical systems, intended for use, as a whole or in part, in hazardous locations. A system approved under this standard is comprised of equipment or components approved to the 60079-11 standard, interconnected to form a system.

ANSI/UL 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') (2017). This standard contains the requirements and testing of equipment emitting optical radiation intended for use in explosive atmospheres. It also covers equipment located outside the explosive atmosphere but which generates optical radiation that is intended to enter an explosive atmosphere

IEC 60079-0, Ed. 7, Explosive atmospheres - Part 0: Equipment - General requirements (Group I) (2017). This standard provides the general requirements for the construction, testing, and marking of electrical equipment intended for use in explosive atmospheres

IEC 60079-1 Ed. 7, Standard for Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures "d" (Group I, Level of Protection 'da') (2014). This standard contains specific requirements for the construction and testing of electrical equipment, with the Type of Protection flameproof (FP) enclosure designated "d" intended for use in explosive gas atmospheres.

IEC 60079-11, Ed. 6, Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety "i" (Group I, Level of Protection 'ia') (2011). This standard 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 that may enter such atmospheres. This type of protection is applicable to electrical equipment in which the electrical circuits themselves are incapable of causing an explosion in the surrounding explosive atmospheres.

IEC 60079-18, Ed. 4.1, Explosive Atmospheres - Part 18: Equipment Protection by Encapsulation 'm' (Group I, Level of Protection 'ma') (2017). This standard provides the specific requirements for the construction, testing, and marking of electrical equipment, parts of electrical equipment, and components not intended to be used alone, with the Type of Protection encapsulation "m" intended for use in explosive gas atmospheres or explosive dust atmospheres.

IEC 60079-25 Ed. 3, Explosive Atmospheres - Part 25: Intrinsically Safe Electrical Systems (Group I, Level of Protection 'ia') (2020). This standard contains the specific requirements for construction and assessment of intrinsically safe electrical systems, intended for use, as a whole or in part, in hazardous locations. A system approved under this standard is comprised of equipment or components approved to the 60079-11 standard, interconnected to form a system.

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’) (2015). This standard contains the requirements and testing of equipment emitting optical radiation intended for use in explosive atmospheres. It also covers equipment located outside the explosive atmosphere but which generates optical radiation that is intended to enter an explosive atmosphere.

<sup>1</sup> For VCS that begin with ANSI/UL and ANSI/ISA and follow with a common number, the versions are identical (co-sponsored and co-published by UL LLC (UL) and the International Society of Automation (ISA)).

### *B. Availability of Voluntary Consensus Standards to be Incorporated by Reference*

The 14 VCS to be incorporated by reference are publicly available and below is the availability information. A copy of each standard proposed to be incorporated by reference is available for inspection at MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202–5452 and at MSHA, Approval and Certification Center, 765 Technology Drive, Triadelphia, WV 26059.

Copies of standards produced by IEC may be obtained from the International Electrotechnical Commission (IEC), 3 rue de Varembé, 1st floor, PO Box 131, CH-1211 Geneva 20, Switzerland, Tel: +41 22 919 0211, and are available for purchase at the IEC website ([www.iec.ch](http://www.iec.ch)).

Copies of standards produced by the ISA, may be obtained from the International Society of Automation (ISA), 67 T.W. Alexander Drive, PO Box 12277, Research Triangle Park, NC 27709, Tel: (919) 549-8411, and are also available for purchase at the ISA website ([www.isa.org](http://www.isa.org)).

Copies of standards produced by UL, may be obtained from UL LLC (UL), Comm 2000, 151 Eastern Avenue, Bensenville, IL 60106, Tel: (888) 853-3503, and are also available for purchase at the UL website ([www.ul.com](http://www.ul.com)).

Copies of each of the 14 VCS may also be obtained from ANSI at the American National Standards Institute (ANSI), 1899 L Street, NW, 11th Floor, Washington, DC 20036, Tel: (202) 293-8020, and online at ANSI's website ([www.ansi.org](http://www.ansi.org)).

Additionally, during the public comment period of this proposed rule, a free, read-only copy of each of the VCS is available for public inspection on ANSI's Standards Connect portal, which is accessible to anyone who registers at <https://www.surveymonkey.com/r/DQVJYMK>.

### *C. Implementation Dates for Voluntary Consensus Standards*

MSHA proposes the following dates for the implementation of the voluntary consensus standard requirements under part 18, also referenced in Table 2 below.

For the period that starts on [effective date of the final rule] and ends on [12 months after the effective date of the final rule]:

- New applications for approval may meet either subparts B through E requirements, or the requirements of the VCS listed in this part;
- Applications for approval in process may meet either subparts B through E requirements, or the requirements of the VCS listed in this part;<sup>3</sup> and
- Applications for formal extensions of approval or certification may meet the requirements under which the last approval, certification, or formal extension was issued by MSHA, or the requirements of the VCS listed in this part.

Starting on [date 12 months after the effective date of the final rule]:

- New applications for approval must meet the requirements of the VCS listed in this part unless no VCS listed in this part apply; and

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<sup>3</sup> Applicants whose applications for approval use subparts B through E requirements and are under MSHA review at the time the final rule becomes effective may resubmit their applications using the VCS if they so choose.

- Applications for formal extensions of approval or certification may meet the requirements under which the last approval, certification, or formal extension was issued by MSHA, or meet the requirements of the VCS listed in this part.

**Table 2 — Implementation Dates for VCS**

Implementation Date	Types of applications	Requirements to be used
For a 12-month period starting on [effective date of final rule]	New applications for approval	Either part 18, subparts B through E, or voluntary consensus standards
	Applications for approval in process	Either part 18, subparts B through E, or voluntary consensus standards
	Applications for changes to existing approved equipment	Requirements under which the last approval, certification, or formal extension was issued by MSHA, or voluntary consensus standards
Starting on [date 12 months after the effective date of the final rule]	New applications for approval	Voluntary consensus standards, and part 18, subparts B through E, if no listed voluntary consensus standard applies
	Applications for changes to existing approved equipment	Requirements under which the last approval, certification, or formal extension was issued by MSHA, or voluntary consensus standards

#### *D. Conforming Changes*

The proposed rule also makes technical changes to 30 CFR part 74 (part 74) regarding the approval requirements for Coal Mine Dust Sampling Devices to conform to the proposed changes in part 18.

### **IV. Section-by-Section Analysis**

#### *A. Section 18.2 – Definitions*

The proposed rule would revise the definition for “permissible equipment.” The proposed rule also would add definitions for “voluntary consensus standard” and “voluntary consensus standards body.”

The definition for “permissible equipment” would be revised to remove the reference to the Mining Enforcement and Safety Administration (MESA). MESA and all 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).

The proposed rule would add two new terms and definitions to § 18.2. One is “voluntary consensus standard” that references a safety standard developed or adopted by a standard-setting organization. Another is “voluntary consensus standards body” that means a domestic or international standard-setting organization that plans, develops, establishes, or coordinates VCS using agreed-upon procedures that are consistent with the Transfer Act and Circular A-119.

Under Circular A-119, a voluntary consensus standards body is recognized if it develops VCS in accordance with the following attributes: openness, balance of interest, due process, an appeals process, and consensus. This standards body also must adopt, publish, and make available to the public the VCS it adopts. Lastly, the voluntary consensus standards body must maintain each voluntary consensus standard through a schedule of review. As a Federal agency, MSHA relies upon OMB guidance in determining whether to incorporate by reference a voluntary consensus standard.

#### *B. Section 18.6 – Applications*

Currently, § 18.6(e) requires that each drawing an applicant submits as part of the approval application under part 18 include a warning stating that changes in design must be authorized by MSHA before they are applied to approved equipment. This assures that all



approval holders understand the importance of the approval for equipment safety and the impact any changes, made by any parties, have on the approval. MSHA proposes to remove this requirement because MSHA specifies in the approval letter sent to applicants that approval holders cannot make changes to designs without MSHA approval. The Agency has determined that the drawing-warning requirement is unnecessary because MSHA ensures throughout the approval process that approval holders are aware of their responsibility to notify MSHA of changes to approved equipment.

*C. Section 18.15 – Changes after approval or certification*

Currently, § 18.15 requires approval holders to submit an application to extend an approval if they want to change any feature of approved equipment or a certified component. Under § 18.15(c), MSHA proposes to add new paragraphs (c)(1) and (2).

Proposed paragraph (c)(1) would allow the application for a change after approval or certification to be made based on the requirements in subparts B through E or the VCS, whichever of these requirements applied to the last approval, certification, or formal extension issued by MSHA. Proposed paragraph (c)(2) would allow an application for a change after approval or certification to be made using the VCS listed in proposed § 18.102 that apply to those components if the applicant chooses to use the VCS requirements even though the last approval, certification, or formal extension issued by MSHA was based on subparts B through E requirements. If no VCS requirements listed in this part apply to a component, then subparts B through E requirements would apply.

Thus, under these proposed changes, approval holders would have the option to make changes based on either the last approval, certification, or formal extension issued by MSHA, or the VCS

listed in this part, so that they could make a decision that suits them best. MSHA solicits comments on this aspect of the proposal.

*D. Section 18.101 – Acceptance and use of voluntary consensus standards*

MSHA proposes to add a new subpart F, Voluntary Consensus Standards, consisting of proposed §§ 18.101 through 18.103.

Proposed § 18.101 is a new section that allows applicants to seek approval under part 18 for designs of electrical machines, accessories, or components that conform to the requirements in the VCS listed in proposed § 18.102. The VCS listed in proposed § 18.102 would apply to many of the components of the completely assembled equipment.

Under this proposal, applications for approval would require specifications to meet the VCS listed in this part, or existing subparts B through E requirements, or both, depending on the types of components in the fully assembled machines and accessories. Powered air-purifying respirators are examples of fully assembled machines that may be approved using only VCS requirements. However, certain completely assembled equipment such as longwall mining systems, continuous mining machines, shuttle cars, and roof-bolters, would not be covered entirely by any VCS of which MSHA is aware. For example, a continuous mining machine is made up of several components such as motors, lights, explosion proof enclosures, and other types of electrical components that are parts of the completely assembled machine. For this type of machine, some components will be subject to VCS requirements and other components will be subject to the subparts B through E requirements for MSHA approval.

Under proposed § 18.101(a), MSHA would replace the requirements specified in subparts B through E for components, accessories, and completely assembled electrical machines with

applicable VCS that are suitable for gassy mining environments and that provide protection against fire or explosion dangers.

In proposed paragraph (b), MSHA is providing a transition period for the optional use of VCS for an applicant who submits an application within the first 12 months after the final rule becomes effective. In proposed paragraphs (b)(1) and (2), the applicant may choose to use either the subparts B through E requirements for any components or the VCS listed in proposed § 18.102 for components to which the listed VCS apply.

In proposed paragraph (c), once the 12-month transition period ends, MSHA would require the use of VCS in new applications for approval. Proposed paragraph (c)(1) would require applicants to use the VCS listed in proposed § 18.102 for components to which the listed VCS apply. In proposed paragraph (c)(2), MSHA would allow applicants to use subparts B through E requirements for a component to which no VCS listed in proposed § 18.102 would apply.

MSHA believes that a 12-month transition period will provide manufacturers, approval holders, and applicants enough time to make design and build changes necessary to meet the required specifications of the VCS for new applications.

MSHA requires marking requirements to indicate that a product is approved for use in gassy mines under § 18.11, subpart A. MSHA recognizes that the proposed VCS include non-technical requirements, such as marking requirements. Some of the markings required under § 18.11 may overlap with some of the markings required by the VCS; however, required VCS markings are not necessary for an approval. MSHA will provide the applicant with the required markings upon approval of an application. Therefore, the MSHA marking requirements in § 18.11, subpart A, would still apply to approved products. The MSHA marking on an approved product would continue to signify to the end users that the product is safe for use in gassy mines.

MSHA believes that the use of VCS under proposed § 18.101 will promote the use of innovative and advanced technologies that lead to improvements in mine safety and health. MSHA expects that the use of VCS would provide applicants and manufacturers with additional product design options for products and equipment with potential use in the mining industry without sacrificing the safety assurances associated with approvals. The use of VCS may also provide applicants and manufacturers access to other markets for products and equipment they currently only sell to the U.S. mining industry. Given the small U.S. market for products that the mining industry uses, designing products to meet MSHA-specific approval criteria can be costly, and in some cases may be financially prohibitive, for manufacturers who produce products for broader commercial use. The proposed changes would allow the introduction of products that conform to the VCS requirements and that further mine safety, but that MSHA could not otherwise approve because the Agency does not currently recognize VCS requirements.

Further, MSHA has determined the VCS that the Agency proposes to incorporate by reference are developed in accordance with the following attributes: openness, balance of interest, due process, an appeals process, and consensus. The use of VCS would make technologically advanced equipment available for use in U.S. mines in a quicker and more cost-effective manner, which could improve miner safety and health.

*E. Section 18.102 – Approved voluntary consensus standards*

Proposed § 18.102 is a new section. Proposed paragraph (a) establishes that MSHA has determined that the list in proposed paragraph (b) is suitable for gassy mining environments and will provide the protection against fire or explosion dangers if used in their entirety to replace MSHA approval requirements specified in subparts B through E.

The design of the electrically operated equipment must comply with the Types of Protection and Levels of Protection in the relevant VCS, as specified in proposed paragraph (b).

In proposed paragraph (b), MSHA would incorporate by reference the VCS listed in this section.

Proposed paragraphs (b)(1) through (3) include the VCS and specify the category of equipment (Group) and Level of Protection applicable to approvals.

These standards are from three sources. For the IEC standards listed in proposed paragraph (b)(1), the source is the International Electrotechnical Commission. For American National Standards listed in proposed paragraphs (b)(2) and (3), the two sources are the International Society for Automation (ISA) and UL LLC (UL). The IEC approves and publishes consensus-based International Standards and manages conformity assessment systems for electric and electronic products, systems and services, collectively known as electrotechnology. ANSI approves the American National Standards and supports the U.S. voluntary standards and conformity assessment system. In the case of the standards that begin with ANSI/ISA or ANSI/UL and follow with a common number, the ISA and UL versions are identical (co-sponsored and co-published). For example, ANSI/ISA 60079-11 and ANSI/UL 60079-11 refer to the same voluntary consensus standard with the specified Types of Protection and Levels of Protection indicated.

Either ANSI or the IEC has approved all of the standards listed in proposed § 18.102. In the discussion below, “60079-0,” “60079-1,” “60079-11,” “60079-18,” “60079-25,” and “60079-28” refer to all three numbered versions of the VCS established by IEC, ISA, and UL.

Typically, the voluntary consensus standard-setting bodies base the ANSI standards on similarly-numbered International IEC standards. The ANSI standards are modifications of the

IEC standards and include U.S. deviations and encompass both additional and deleted information. Experts prepare and maintain IEC standards using a rigorous and well-defined process. Similarly, the U.S. deviations are developed by nationally-recognized and vetted experts and are approved as American National Standards only if the appropriate procedures are followed.

The listed ANSI standards are interdependent with each other and with the NEC. Also, the listed IEC standards are interdependent with each other. For intrinsically safe devices, for example, 60079-0 provides the general requirements, and 60079-11 supplements and modifies the general requirements of 60079-0 (with documented exceptions). Similarly, for intrinsically safe systems, the 60079-25 standard supplements and modifies the general requirements of 60079-0 and the intrinsic safety standard 60079-11. For encapsulated electrical equipment, the 60079-18 standard also supplements and modifies the general requirements of 60079-0. For equipment and transmission systems using optical radiation, the 60079-28 standard also supplements and modifies the general requirements of 60079-0.

The 60079-0 standard provides the general requirements for the construction, testing, and marking of electrical equipment intended for use in explosive atmospheres.

The 60079-1 standard contains specific requirements for the construction and testing of electrical equipment, with the Type of Protection flameproof (FP) enclosure designated “d” intended for use in explosive gas atmospheres.

Similarly, 60079-11 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 that may enter such atmospheres.

Also, 60079-18 provides the specific requirements for the construction, testing, and marking of electrical equipment, parts of electrical equipment, and components not intended to be used alone, with the Type of Protection encapsulation “m” intended for use in explosive gas atmospheres or explosive dust atmospheres.

The 60079-25 standard contains the specific requirements for construction and assessment of intrinsically safe electrical systems, intended for use, as a whole or in part, in hazardous locations. A system approved under this standard is comprised of equipment or components approved to the 60079-11 standard, interconnected to form a system.

Finally, 60079-28 contains the requirements of equipment emitting optical radiation intended for use in explosive atmospheres. It also covers equipment located outside the explosive atmosphere but which generates optical radiation that is intended to enter an explosive atmosphere.

The listed standards apply to equipment for use in all explosive atmospheres and locations that are likely to include those hazardous atmospheres. For the risk of ignition associated with gas concentrations, electrical equipment is divided into two broad categories: Group I and Group II.

Group I electrical equipment is intended for use in mines susceptible to firedamp, a flammable gas found in coal mines. Group II electrical equipment is intended for use in places with an explosive gas atmosphere, other than mines susceptible to firedamp. Both the ANSI and IEC standards note that firedamp consists mainly of methane, but also contains small quantities of other gases, such as nitrogen, carbon dioxide, and hydrogen, and sometimes ethane and carbon monoxide. The terms “firedamp” and “methane” are used frequently in mining practice as synonyms. In further discussions below, only the term “methane” will be used for simplicity.

The protections in these standards for Group I electrical equipment account for the ignition of both methane and coal dust, along with enhanced physical protection for equipment used underground. Thus, in this proposed rulemaking, MSHA proposes to use the requirements associated for Group I equipment in the listed standards.

As explained above, Group II electrical equipment is intended for use in places with an explosive gas atmosphere other than mines susceptible to methane. Also, Group II electrical equipment is subdivided according to the nature of the explosive gas atmosphere for which it is intended. Group II subdivisions are as follows: IIA, a typical gas is propane; IIB, a typical gas is ethylene; and IIC, a typical gas is hydrogen. Because gassy mines where coal dust is commonly present may vary from the environments in which Group II electrical equipment is intended to operate, this proposed rule does not allow the use of Group II requirements in the listed standards.

The standards further define various “Types of Protection,” such as intrinsic safety. These “Types of Protection” are subdivided into “Levels of Protection” that differentiate the likelihood of the equipment becoming a source of ignition. For example, Type of Protection “intrinsic safety i” is defined by National Fire Protection Association (NFPA) 70, National Electrical Code (NEC), as Type of Protection where any spark or thermal effect is incapable of causing ignition of a mixture of flammable or combustible material in air under prescribed test conditions. In U.S. industries other than mining, and in mines internationally, the required Level of Protection is defined by the exposure to the hazard. These hazardous locations are divided into Zones, based on the level of exposure to the hazard. There are three such Zones defined in the NFPA 70, NEC, which is based on international standards. For explosive gases, for example, a Zone 0 location has ignitable concentrations of flammable gases or vapors either continuously



present or present for long periods of time. A Zone 0 location, by definition, requires the highest protection levels against fire or explosion for equipment when used in Zone 0 atmospheres. The likelihood of exposure to flammable gases or vapors is lower in Zone 1 locations, and is further reduced in Zone 2 locations. Therefore, Zones 1 and 2 locations have reduced Levels of Protection requirements for equipment used in these locations compared to the Level of Protection for equipment used in Zone 0 locations. The NFPA 70, NEC subdivides Type of Protection “intrinsic safety i” into Levels of Protection “ia,” “ib,” and “ic” and designates that Level of Protection “ia” is appropriate for Zone 0, “ib” is appropriate for Zone 1, and “ic” is appropriate for Zone 2. Thus, Level of Protection “ia” is the highest Level of Protection.

To simplify the selection of electrical equipment for a given purpose, the standards also incorporate “Equipment Protection Levels,” or EPLs. These EPLs are assigned to equipment based on its likelihood of becoming a source of ignition and distinguishing the differences between explosive atmosphere types. For example, EPL G is intended for explosive gas atmospheres, EPL D is intended for explosive dust atmospheres, and EPL M is intended for explosive atmospheres in mines susceptible to methane. The EPLs are further subdivided into protection levels Ga, Da, and Ma for very high protection suitable for a two-fault scenario; Gb, Db, and Mb for high protection suitable for a single fault scenario; and Gc and Dc for enhanced protection to minimize ignition risk. Thus, EPLs Ga, Da, and Ma are the highest protection levels for explosive gas atmospheres, dust atmospheres, and mine atmospheres susceptible to methane, respectively.

In 2018, researchers at the National Institute for Occupational Safety and Health (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.”<sup>4</sup> The researchers concluded that the relative Level of Protection afforded 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. 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. MSHA is proposing to allow the use of the latest versions of the ANSI and IEC intrinsic safety standards.

The “two-fault IS standard” to which the NIOSH researchers refer above is the 60079-11 standard, Level of Protection “ia.” This means that the researchers concluded, for intrinsically safe equipment and associated apparatuses, Level of Protection “ia” in the 60079-0, 60079-11, and 60079-25 standards provide miners with protection against fire and explosion dangers. The researchers subsequently concluded that the use of such equipment would provide at least an equivalent level of safety as that provided by equipment approved to MSHA criteria.<sup>5</sup> MSHA agrees with this conclusion. Thus, because the NIOSH researchers have determined that Level of Protection “ia” provides miners with protection against fire and explosion, MSHA is proposing to require that manufacturers seeking approval using the incorporated VCS conform to the “ia” Level of Protection where designated in this proposal.

Further, as discussed above, NFPA 70, NEC notes that intrinsic safety is the designated Type of Protection “ia” (intrinsic safety) for use in Zone 0 locations. The only other types of protection that NFPA 70, NEC allows for use in Zone 0 is Type of Protection “da” (flameproof enclosures) as defined in 60079-1 and Type of Protection “ma” (encapsulation) as defined in the

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<sup>4</sup> William Calder, David P. Snyder, John F. Burr, Intrinsicly Safe Systems: Equivalency of International Standards Compared to U.S. Mining Approval Criteria, DOI 10.1109/TIA.2018.2804322, IEEE Transactions on Industry Applications.

<sup>5</sup> *Ibid.*

60079-18 standard. MSHA believes that “ia,” “da,” and “ma” will provide the necessary Level of Protection for miners because the NEC allows “ia,” “da,” and “ma” for use in Zone 0. MSHA has allowed encapsulated assemblies to be approved under part 18, since 2009, as noted in MSHA’s Encapsulation Criteria, ACRI2010.<sup>6</sup> ACRI2010 was based, in part, on the requirements of 60079-18 in place at the time it was created. MSHA has received no reports that encapsulated assemblies tested and evaluated to ACRI2010 have failed to provide the intended protection.

MSHA is proposing to include the 60079-1 standard for FP enclosures, but only Level of Protection “da” which is suitable for use in Zone 0 locations. Level of Protection “da” is applicable only to catalytic sensors of portable combustible gas detectors. Levels of Protection “db” and “dc” are not being included because they do not provide miners with suitable protection against fire and explosion in gassy mines.

MSHA proposes to include the 60079-18 standard (Level of Protection “ma”) based on the following: (1) MSHA’s experience with ACRI2010 and (2) the fact that the hazardous locations community allows the use of “ma” equipment in Zone 0, coupled with the determination by NIOSH researchers that the only other Level of Protection allowed in Zone 0 (“ia”) provides miners protection against fire and explosion. Similarly, the 60079-28 standard (Equipment Protection Level Ma) is included based on the same factors.

In conclusion, the proposed rule would allow for the use of the latest versions of the ANSI and IEC standards for intrinsic safety (“ia”), flameproof catalytic sensors (“da”), and encapsulation (“ma”) as they apply to Group I (Zone 0) (mining) equipment.

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<sup>6</sup> <https://arlweb.msha.gov/techsupp/acc/application/acri2010.pdf>

MSHA is interested in whether the proposal should be expanded to include other VCS. Please provide the rationale, with definitive data and explanation, for your position.

In summary, MSHA proposes to incorporate by reference the IEC standards in proposed paragraph (b)(1) and the ANSI standards in proposed paragraphs (b)(2) and (3), which are appropriate for use in Zone 0 locations. MSHA has determined that the VCS in proposed § 18.102 would provide protection against fire or explosion if used in their entirety to replace MSHA approval requirements specified in subparts B through E. However, the marking requirements in subpart A of this part would not be superseded by the requirements specified in the proposed VCS. The marking requirement in the existing rule would be included in the approval marking requirements as specified in § 18.11, subpart A.

*F. Section 18.103 – Review and update of applicable voluntary consensus standards*

Proposed § 18.103 is a new section about updating the existing list of VCS. To ensure timely updating of the list in § 18.102, MSHA would review more recent editions of the listed VCS and determine whether to accept them. Also, MSHA may 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 dangers. After such thorough reviews, MSHA would use the appropriate rulemaking process to publish an updated list of VCS that the Agency would accept to replace approval requirements in subparts B through E in part 18. MSHA also may remove a standard from the list in § 18.102 if it is withdrawn by a voluntary consensus standards body or for other reasons.

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 proposed § 18.103, MSHA would consider updates and alternatives to existing standards that promote the efficiency and effectiveness of the MSHA approval process, which could lead to the use of innovative and advanced technologies in U.S. mines and to improvements in mine safety and health.

### **Conforming Amendments**

This proposal would require conforming amendments to Coal Mine Dust Sampling Devices in existing part 74 based on the proposed changes in part 18.

### **Part 74 – Coal Mine Dust Sampling Devices**

MSHA proposes to change cross-references in §§ 74.5(b) and 74.11(d) for evaluation and testing for permissibility of Coal Mine Dust Sampling Devices from § 18.68 to 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.

## **V. Regulatory Economic Analysis**

### *A. Executive Orders 12866: Regulatory Planning and Review, and 13563: Improving Regulation and Regulatory Review*

Executive Orders (E.O.s) 12866 and 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). E.O. 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility.

Currently, MSHA or an independent laboratory conducts the testing and evaluation of electrical products for which applicants seek MSHA approval for use in gassy mines. For new

approval applications, this proposal would allow applicants to use either existing MSHA requirements or VCS for the first 12 months after the final rule becomes effective. After 12 months, MSHA will require new applicants to (1) use VCS requirements that apply to the components of the electrical machine or accessory and (2) use existing MSHA requirements for the components of the electrical machine or accessory to which no listed VCS apply. Under current regulations, costs to approve equipment are defined as transfers and not E.O. 12866 costs. In this case, costs represent MSHA's costs recovered from approval applicants via a fee.

Under the proposed rule, it is unlikely that the number of approval requests will change much. Based on discussions with past applicants, MSHA understands that many products submitted to MSHA for approval have been accepted using VCS for mining outside the U.S. or for other industries (e.g., oil and gas extraction) that have similar safety standards. Applicants submitting these types of products for MSHA approval would likely experience substantially lower approval costs. Because their products already meet VCS listed in this proposed rule and would no longer need to meet MSHA-specific requirements, no additional technical drawings, documentation, and testing would be necessary beyond that submitted elsewhere for VCS approval.

Some current approval holders may incur costs because of the requirement to use VCS after the 12-month transition period.<sup>7</sup> For those requesting new approvals, the costs would be mostly attributable to the approval holder having to create new design and build specifications using VCS requirements instead of using already existing design and build specifications based on part 18, subparts B through E, requirements. By contrast, current approval holders that are requesting only a minor modification of an approval should not incur costs, because they would

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<sup>7</sup> Applicants may choose to use VCS for new approvals for the first 12 months after the effective date of the final rule. After 12 months, new applications for approval must use VCS, if applicable.

be allowed to choose to use the requirements (either part 18, subparts B through E, or VCS) under which the last approval, certification, or formal extension was issued by MSHA. Based on discussions between MSHA and applicants during past approvals, MSHA concludes that a small number of current approval holders may decide not to stay in the mining market.

This proposed rule will provide benefits to both manufacturers of electrical products and the consumers of those products—mine operators and miners. Currently, some products that use modern technologies that could improve the safety and health of miners are not being introduced into the U.S. mining market. One reason may be that technical requirements set by MSHA differ from those that apply in other countries. These MSHA-specific technical requirements may slow, or even prevent, these new technologies from being implemented in U.S. underground mines. Use of VCS to replace MSHA-specific requirements would likely reduce the overall design and approval costs for many manufacturers; as a result, manufacturers introducing new technologies may experience fewer barriers for product market entry into the mining industry.

This proposed rule would not affect currently approved equipment, as it would allow manufacturers and mine operators to continue to sell or purchase all currently approved equipment. If at a future date, a current approval holder wishes to alter approved equipment, the application could comply with the requirements on which the approval was based or with the VCS requirements listed in this part.

Therefore, MSHA does not anticipate that manufacturers will have difficulties in meeting these requirements. MSHA's acceptance of VCS would provide more choices of mining products to mine operators and miners, as these VCS are used by the broader market. MSHA does not anticipate problems in manufacturing or purchasing products that meet VCS, as such products are already in use in markets outside of U.S. mining.

In summary, under this proposal, approval holders would not be required to alter equipment or incur any new costs for existing approvals. New applicants may choose the standards most beneficial to them during the 12-month transition period. For those applicants whose products already meet VCS requirements, they would likely experience either no new costs, or cost reductions. Overall, net costs are more likely to go down than up.

The Agency is interested in whether the proposal to include VCS may result in cost differences for applicants due to the proposal to eliminate subparts B through E requirements for new approvals. Please provide the rationale, with definitive data and explanation, for your position.

Under E.O. 12866, a significant regulatory action is one meeting any of a number of specified conditions, including the following:

- Having an annual effect on the economy of \$100 million or more;
- Creating a serious inconsistency or interfering with an action of another agency;
- Materially altering the budgetary impact of entitlements or the rights of entitlement recipients; or
- Raising novel legal or policy issues.

MSHA has determined that this is not a significant regulatory action under E.O. 12866.

*B. E.O. 13771: Reducing Regulation and Controlling Regulatory Costs, and E.O. 13924:*

*Regulatory Relief to Support Economic Recovery*

This proposed rule is not expected to be an E.O. 13771 regulatory action, because this proposed rule is not significant under E.O. 12866. As discussed above, the proposed use of VCS would have minimal total costs, but it would have the benefit of streamlining product approval



and providing greater flexibility to potential market entrants and therefore MSHA believes it will be deregulatory.

MSHA also believes the proposal meets policy goals of E.O. 13924: it reflects the efforts of businesses to comply with often-complex approval regulations, and it provides businesses with the confidence that requesting approvals covered by this proposal will allow them to meet a single set of standards as they plan product development for global markets.

## **VI. Feasibility**

Economic feasibility is related to an entire industry rather than individual firms. In the E.O. 12866 and E.O. 13563 section above, MSHA discussed that global manufacturers of products for mining already successfully use the VCS for mining outside the U.S. The proposal would provide MSHA and most manufacturers increased flexibility for approval of existing or new equipment for use in gassy mines. Although some businesses might choose not to seek new approvals, MSHA could not identify any product that would likely leave the U.S. market without the availability of an alternative. MSHA has concluded that the requirements of the proposed rule would be both technologically and economically feasible.

## **VII. Regulatory Flexibility Act; Small Business Regulatory Enforcement Fairness Act; and E.O. 13272.**

MSHA has analyzed the overall compliance cost impact of the proposed rule on small entities. No current approval holder would be required to make a product change due to this proposal. A small entity would make application for an extension or new approval only if the financial benefit outweighs new costs. For new product approvals, the existing MSHA approval requirement costs would be replaced by compliance costs of the VCS. Because MSHA cannot know what products would be submitted for approval, it is not possible to quantify how much

different the costs would be. Based on the discussions between MSHA and applicants described previously, MSHA believes the MSHA standards to be more burdensome, and the Agency projects cost reductions for some small entities. For E.O. 13272 considerations of the applicable statutes, there are no new mandated direct costs of this proposed rule. MSHA proposes to certify that the rule would not have a significant economic impact on a substantial number of small entities. Therefore, the Agency is not required to develop an initial regulatory flexibility analysis.

### **VIII. Paperwork Reduction Act of 1995**

The Paperwork Reduction Act (PRA) 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 (44 U.S.C. 3501). There are no new information collections associated with this proposed rule.

### **IX. Other Regulatory Considerations**

#### *A. The Unfunded Mandates Reform Act of 1995*

MSHA has reviewed the proposed rule under the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1501 et seq.). MSHA has determined that this proposed rule does not include any Federal mandate that may result in increased expenditures by State, local, or tribal governments. Since the proposed 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.

#### *B. E.O. 13132: Federalism*

The proposed rule does not have “federalism implications” because it would 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.

*C. E.O. 12630: Government Actions and Interference with Constitutionally Protected Property Rights*

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

*D. E.O. 12988: Civil Justice Reform*

The proposed 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.

*E. E.O. 13175: Consultation and Coordination with Indian Tribal Governments*

This proposed rule does not have “tribal implications” because it would 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.

*F. E.O. 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 proposed rule for its energy effects. There are no costs associated with this proposed rule. For the energy analysis, this rule would not exceed the relevant criteria for adverse impact.

#### *G. Congressional Review Act*

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

#### **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.

For the reasons set out in the preamble, and under the authority of the Federal Mine Safety and Health Act of 1977, as amended by the Mine Improvement and New Emergency Response Act of 2006, MSHA proposes to amend 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 applied to the last approval, certification, or extension thereof; or
- (2) Meets voluntary consensus standard requirements listed in this part that apply to those components if the applicant chooses to use the requirements of the voluntary consensus standards.

\* \* \* \* \*

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) MSHA will accept 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 to replace the requirements in subparts B through E of this part.

(b) For applications submitted on or after [effective date of final rule] until [date 12 months after the effective date of final rule], 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 voluntary consensus standard requirements listed in this part that apply to those components.

(c) For applications submitted on or after [date 12 months after the effective date of the final rule], an approval will be issued in accordance with subpart A of this part for a completely assembled electrical machine or accessory, if the components of such machine or accessory:

(1) Meet the requirements of the voluntary consensus standards listed in this part that apply to those components; and

(2) Meet the requirements of subparts B through E of this part that apply to components if no voluntary consensus standard listed in this part applies.

**§ 18.102 Approved voluntary consensus standards.**

(a) MSHA has determined that the provisions associated with the Group and Levels of Protection provisions of the voluntary consensus standards listed in paragraph (b) of this section are suitable for gassy mining environments and will provide the protection for against fire or explosion if used in their entirety and without modification to replace the requirements in subparts B through E of this part.

(b) 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 material is available for inspection at U.S. Department of Labor, Mine Safety and Health Administration, 765 Technology Drive, Triadelphia, WV 26059, Tel: (304) 547-0400, and is available from the sources indicated in this paragraph (b). It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov) or go to [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

(1) International Electrotechnical Commission (IEC), 3 rue de Varembeé, 1st floor, PO Box 131, CH-1211 Geneva 20, Switzerland, Tel: +41 22 919 0211 (<https://www.iec.ch/>)

(i) IEC 60079-0, Ed. 7, Explosive atmospheres - Part 0: Equipment - General requirements (Group I), dated December 13, 2017;

(ii) IEC 60079-1 Ed. 7, Standard for Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures “d” (Group I, Level of Protection ‘da’), dated June 27, 2014;

(iii) IEC 60079-11, Ed. 6, Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety “i” (Group I, Level of Protection ‘ia’), dated June 30, 2011;

(iv) IEC 60079-18, Ed. 4.1, Explosive Atmospheres - Part 18: Equipment Protection by Encapsulation “m” (Group I, Level of Protection ‘ma’), dated August 25, 2017;

(v) IEC 60079-25 Ed. 3, Explosive Atmospheres - Part 25: Intrinsically Safe Electrical Systems (Group I, Level of Protection ‘ia’), dated June 26, 2020; and

(vi) 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’), dated May 27, 2015.

(2) International Society of Automation (ISA), 67 T.W. Alexander Drive, PO Box 12277, Research Triangle Park, NC 27709, Tel: (919) 549-8411 (<https://www.isa.org>).

(i) 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; and

(ii) 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.



(3) UL LLC, Comm 2000, 151 Eastern Avenue, Bensenville, IL 60106, Tel: (888) 853-3503 (<https://www.ul.com>).

(i) ANSI/UL 60079-0 Ed. 7, Explosive Atmospheres - Part 0: Equipment-General Requirements (Group I), dated March 26, 2019;

(ii) ANSI/UL 60079-1 Ed. 7, Standard for Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures “d” (Group I, Level of Protection ‘da’), dated September 18, 2015;

(iii) ANSI/UL 60079-11 Ed. 6, Standard for Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety “i” (Group I, Level of Protection ‘ia’), dated February 15, 2013;

(iv) ANSI/UL 60079-18, Ed. 4, Standard for Explosive Atmospheres - Part 18: Equipment Protection by Encapsulation “m” (Group I, Level of Protection ‘ma’), dated December 14, 2015;

(v) ANSI/UL 60079-25 Ed. 2, Standard for Explosive Atmospheres - Part 25: Intrinsically Safe Electrical Systems (Group I, Level of Protection ‘ia’), dated December 2, 2011; and

(vi) ANSI/UL 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’), dated September 15, 2017.

(4) The voluntary consensus standards listed in this paragraph (b) may also be obtained from the American National Standards Institute, 1899 L Street, NW, 11th Floor, Washington, DC 20036, Tel: (202) 293-8020 (<https://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 to replace the requirements in subparts B through E of this part.

(b) MSHA may review voluntary consensus standards not listed 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 to replace the requirements in subparts B through E of this part.

(c) Following such review and determination, MSHA will use the appropriate rulemaking process to publish a list of voluntary consensus standards that it accepts in lieu of the requirements in subparts B through E of this part.

#### **PART 74 - 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.”

**David G. Zatezalo,**

*Assistant Secretary of Labor for Mine Safety and Health.*