e: 4520-43-P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standard

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by the party listed below.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**].

ADDRESSES: You may submit comments identified by Docket No. MSHA-2023-0040 by any of the following methods:

1. *Federal eRulemaking Portal:* https://www.regulations.gov. Follow the instructions for submitting comments for MSHA-2023-0040.

2. *Fax:* 202-693-9441.

3. *Email*: petitioncomments@dol.gov

4. *Regular Mail or Hand Delivery:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452.

Attention: S. Aromie Noe, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk in Suite 4E401. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202-693-9455 to make an appointment, in keeping with the Department of Labor's COVID-19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: S. Aromie Noe, Office of Standards, Regulations, and Variances at 202-693-9440 (voice), Petitionsformodification@dol.gov (email), or 202-693-9441 (fax). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or
2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M-2023-010-C

Petitioner: Peabody Twentymile Coal Mining, LLC, 29515 Routt County Road 27, Oak Creek, Colorado 80467.

Mine: Foidel Creek Mine, MSHA ID No. 05-03836, located in Routt County, Colorado.

Regulation Affected: 30 CFR 75.507-1(a) (Electrical equipment other than power-connection points; outby the last open crosscut; return air; permissibility requirements).

Modification Request: The petitioner requests a modification of 30 CFR 75.500(d) to permit the use of Versaflo TR-800 and CleanSpace EX powered respirators, nonpermissible batter powered air-purifying respirators (PAPR) in return air outby the last open crosscut.

The petitioner states that:

(a) The mine utilizes the continuous mining method.

(b) Petitioner uses the 3M Airstream PAPR under an existing decision and order to provide additional protection for its miners against exposure to respirable coal mine dust on the long wall faces.

(c) 3M discontinued the Airstream PAPR June 1, 2020, due to disruption in their component supply.

(d) Currently, there is no PAPRs that meets MSHA's permissibility requirements. The 3M Versaflo TR-800 PAPR is available, but it is not permissible, and 3M is currently not pursuing approval.

(e) The Versaflo TR-800 motor/blower and battery qualify as intrinsically safe in the U.S., Canada, and countries that accept the International Electrotechnical Commission System for Certification to Standards Relating to Equipment for Use in Explosive Atmosphere (IECEx). The Versaoflo TR-800 motor/blower is UL-certified with an intrinsically safe (IS) rating of Division 1: IS Class I, II, III; Division 1 (includes Division 2) Groups C, D, E, F, G; T4, under the most current standard (UL 60079, 6* Edition, 2013). It is also ATEX-certified with an intrinsically safe (IS) rating of "ia." The Versaflo TR-800 is also rated and marked with Ex ia, I Ma, Ex ia IIB T4 Ga, Ex ia IIIC 135"C Da, -20°C < Ta < +55"C, under the current standard (IEC 60079).

(f) The CleanSpace EX PAPR is not currently approved as permissible by MSHA and CleanSpace is pursuing approval.

(g) The CleanSpace EX PAPR is certified by TestSafe Australia (TSA) according to the IEC 60079-0:2011(General Requirements) and IEC 60079-11:2011 (Intrinsic Safety) standards. The certificate, issued to PAFtec Australia Pty Ltd (PAFtec), allows PAFtec to mark the device as

"Ex ib IIB T4 Gb" and "Ex ia I Ma." Therefore, the CleanSpace EX has been determined to be intrinsically safe under IECEx and other international standards.

(h) In 2017, the National Institute for Occupational Safety and Health (NIOSH) published "An Evaluation of the Relative Safety of U.S. Mining Explosion-Protected Equipment Approval Requirements versus those of International Standards" in which NIOSH determined that electrical and electronic equipment which meets two-fault intrinsic safety as defined in the ANSI/UL 60079 standard would provide at least an equivalent level of safety as that provided by equipment approved to MSHA permissibility standards.[1]

(i) The UL-certification, TSA certification, and PAFtec listing material (drawings, certificate and text report) support the conclusion that the Versaflo TR-800 and the CleanSpace EX meet the applicable "two fault" intrinsic safety requirements for mining equipment as found in the ANSI/UL standard.

(j) The Versaflo TR-800 carries an ingress protection (IP) rating of IP64. The CleanSpace EX carries an IP rating of IP66. Both ratings exceed the minimum rating of IP54 required by the ANSI/UL and IEC standards for intrinsically safe mining equipment.

The petitioner proposes the following alternative method:

(a) The PAPRs, including battery packs, all associated wiring and connections shall be inspected before use to determine if there is any damage to the units that would negatively impact intrinsic safety. If any defect is found, the PAPR shall be removed from service.

(b) The operator shall maintain a separate logbook for each of the PAPRs that shall be kept with the equipment, or in a location with other mine record books and shall be made available to MSHA upon request. The equipment shall be examined at least weekly by a qualified person as defined in 30 CPR 75.512-1 and the examination results shall be recorded in the logbook. Since

[1] William Calder, David P. Snyder, John F. Burr, (2017). *An Evaluation of the Relative Safety of U.S. Mining Explosion-Protected Equipment Approval Requirements versus those of International Standards,* Transactions of Society for Mining, Metallurgy, and Exploration, Inc, 342, 43-50.

float coal dust is removed by the air filter prior to reaching the motor, the PAPR user shall conduct regular examinations of the filter and perform periodic testing for proper operation of the "high filter load alarm" on the Versaflo TR-800, and the "blocked filter" alarm on the CleanSpace EX PAPR. Examination entries shall be maintained for at least one year.

(c) All Versaflo TR-800 and CleanSpace EX PAPRs to be used in the return air outby the last open crosscut, shall be physically examined prior to initial use and each PAPR shall be assigned a unique identification number. Each PAPR shall be examined by the person to operate the equipment prior to taking the equipment underground to ensure the equipment is being used according to the original equipment manufacturer's recommendations and maintained in a safe operating condition.

(d) The examinations for the Versaflo TR-800 shall include:

1. Check the equipment for any physical damage and the integrity of the case;
2. Remove the battery and inspect for corrosion;
3. Inspect the contact points to ensure a secure connection to the battery;
4. Reinsert the battery and power up and shut down to ensure proper connections; and
5. Check the battery compartment cover or battery attachment to ensure that it is securely fastened; and.
6. For equipment utilizing lithium type cells, ensure that lithium cells and/or packs are not damaged or swelled in size.

(e) The CleanSpace EX does not have an accessible or removeable battery. The battery and motor assembly are both contained within the sealed power pack assembly and cannot be removed, reinserted, or fastened. The pre-use examination is limited to inspecting the equipment for indications of physical damage.

(f) The operator shall ensure that all Versaflo TR-800 and CleanSpace EX units are serviced according to the manufacturer’s recommendations. Dates of service shall be recorded in the equipment’s logbook and shall include a description of the work performed.

(g) The Versaflo TR-800 and CleanSpace EX PAPRs used in the return air outby the last open crosscut, or in areas where methane may enter the air current, shall not be put in service until MSHA has initially inspected the equipment and determined that it is in compliance with the proposed decision and order (PDO).

(h) Methane tests shall be made in accordance with 30 CFR 75.323(a) before taking or energizing the Versaflo TR-800 or the CleanSpace EX in the return air outby the last open crosscut.

(i) All hand-held methane detectors shall be MSHA-approved and maintained in permissible and proper operating condition as defined by 30 CFR 75.320. All methane detectors shall provide visual and audible warnings when methane is detected at or above 1.0 percent.

(j) A qualified person as defined in existing 30 CFR 75.151 shall continuously monitor for methane immediately before and during the use of the Versaflo TR-800 or CleanSpace EX in the return air outby the last open crosscut.

(k) Neither the Versaflo TR-800 nor the CleanSpace EX shall be used in methane concentrations detected at or above 1.0 percent methane. When 1.0 percent or more of methane is detected while the Versaflo TR-800 or CleanSpace EX is being used, the equipment shall be de-energized immediately and the equipment withdrawn outby the last open crosscut.

(l) The Versaflo TR-800 PAPRs only use the 3M TR-830 Battery Pack, which meets lithium battery safety standard UL 1642 or IEC 62133. The CleanSpace EX PAPRs shall use the CleanSpace EX Power Unit, which meets lithium battery safety standard UL 1642 or IEC 62133.

(m) The battery packs must be “changed out” in intake air outby the last open crosscut. Before each shift when the Versaflo TR-800 or CleanSpace EX is to be used, all batteries and power units for the equipment must be charged sufficiently so that they are not expected to be replaced on that shift.

(n) The following maintenance and use conditions shall apply to the equipment Versaflo TR-800 or the CleanSpace EX containing lithium-type batteries:

1. The petitioner shall always correctly use and maintain the lithium-ion battery packs. Neither the 3M TR-830 Battery Pack nor the CleanSpace EX Power Unit may be dissembled or modified by anyone other than permitted by the manufacturer of the equipment.
2. The 3M TR-830 Battery Pack must only be charged in an area free of combustible material, readily monitored and located on the surface of the mine. The 3M TR-830 Battery Pack is to be charged by either:
    i. 3M Battery Charger Kit TR-641N, which includes one 3M Charger Cradle TR-640 and one 3M Power Supply TR-941N, or,
    ii. 3M 4- Station Battery Charger Kit TR-644N, which includes four 3M Charger Cradles TR-640 and one 3M 4-Station Battery Charger Base/Power Supply TR-944N.
3. The CleanSpace EX Power Unit is to be charged only by the CleanSpace Battery Charger EX, Product Code PAF-0066.
4. The batteries shall be kept dry and shall not be exposed to water. This does not preclude incidental exposure of sealed battery packs.
5. The batteries shall not be used, charged, or stored in locations where the manufacturer's recommended temperature limits are exceeded. The batteries shall not be placed in direct sunlight or used or stored near a source of heat.
6. The battery shall not be used at the end of its life cycle (e.g. when there is a performance decrease of greater than 20 percent in battery operated equipment). The battery must be disposed of properly.

(o) Affected mine employees must be trained in the proper use and maintenance of the Versaflo TR-800 and the CleanSpace EX PAPRs in accordance with established manufacturer guidelines. This training shall alert the affected employees to recognize the hazards and limitations associated with the use of the equipment in areas where methane could be present and

that neither the Versaflo TR-800 nor the CleanSpace EX is approved under 30 CFR part 18. The affected mine employees shall also be trained to de-energize the PAPRs when 1.0 or more percent methane is detected. The training shall also include the proper method to de-energize these PAPRs. In addition to manufacturer guidelines, mine employees shall be trained to inspect the units before use to determine if there is any damage to the PAPRs that would negatively impact intrinsic safety as well as all stipulations in the PDO.

(p) Mine employees shall be trained regarding proper procedures for donning Self-Contained Self Rescuers (SCSRs) during a mine emergency while wearing the Versaflo TR-800 or CleanSpace EX. The mine operator shall submit proposed revisions to update the Mine Emergency Evacuation and Firefighting Program of Instruction under 30 CFR 75.1502.

(q) Within 60 days after the PDO becomes final, the operator shall submit proposed revisions for its approved 30 CFR part 48 training plans to the MSHA District Manager. These proposed revisions shall specify initial and refresher training regarding the terms and conditions stated in the PDO. When training is conducted on the terms and conditions in the PDO, an MSHA Certificate of Training (Form 5000-23) shall be completed. Comments shall be included on the Certificate of Training indicating that the training received was for use of the Versaflo TR-800 or CleanSpace EX.

(r) All personnel who will be involved with or affected by the use of the Versaflo TR-800 or CleanSpace EX shall receive training in accordance with 30 CFR 48.7 on the requirements of the PDO within 60 days of the date the PDO becomes final. Such training shall be completed before any Versflo TR-800 or CleanSpace EX can be used in return air outby the last open crosscut. The operator shall keep a record of such training and provide such record to MSHA upon request.

(s) The operator shall provide annual retraining to all personnel who will be involved with or affected by the use of the Versaflo TR-800 or CleanSpace EX in accordance with 30 CFR 48.8. The operator shall train new miners on the requirements of the PDO in accordance with 30

CFR 48.5 and shall train experienced miners on its requirements of this Order in accordance with 30 CFR 48.6. The operator shall keep a record of such training and provide such record to MSHA upon request.

(t) The final PDO shall be posted in unobstructed locations on the bulletin boards and/ or in other conspicuous places where notices to miners are ordinarily posted, for a period of not less than 60 consecutive days.

The petitioner asserts that the alternate method proposed will at all times guarantee no less than the same measure of protection afforded the miners under the mandatory standard.

Song-ae Aromie Noe,

Director,

Office of Standards, Regulations, and Variances.

[FR Doc. 2023-17619 Filed: 8/15/2023 8:45 am; Publication Date: 8/16/2023]