



Memorandum

To: Christina Shupe, Executive Officer
Occupational Safety and Health Standards Board

July 27, 2021

From: Douglas Parker, Chief Division of Occupational Safety and Health

Handwritten signature of Douglas Parker in blue ink.

Subject: Evaluation of Petition No. 588 to Amend Title 8, Unfired Pressure Vessel Safety Orders.
Section 462(m)

1.0 INTRODUCTION AND BACKGROUND

On January 5, 2021, the Division of Occupational Safety and Health (Cal/OSHA) received a petition from Mr. Michael Miller (Petitioner) to amend Title 8. The Petitioner is the President and Director of Original Sixteen to One Mine, Inc., which was incorporated in San Francisco in 1911. According to Mr. Miller, Original Sixteen to One Mine, Inc. is the longest continuing active underground gold mine in North America. The Petitioner requests changes to Title 8 Section 462(m) Field Inspections and Reports.

Labor Code section 142.2 permits interested persons to propose new or revised standards concerning occupational safety and health, and requires the Occupational Safety and Health Standards Board (Standards Board) to consider such proposals. Per Labor Code section 147 the Standards Board has referred to Cal/OSHA for evaluation.

2.0 PETITIONER'S REQUEST TO AMEND SECTION 462(m)

Title 8 Section 462(m)(1) currently requires piping systems for compressed air conveyance to be in accordance with ANSI B31.1 or B31.3. Title 8 462 (m)(3) contains specific requirements for compressed air conveyance using plastic piping systems which includes polyethylene (PE) pipe.

The petitioner requests a change to Section 462(m) to "bring the outdated standard in compliance with the times".

The petitioner has not suggested any specific changes to Title 8 462(m). The Petition mentions no updated standard nor the change it would have on Title 8 462(m).

3.0 APPLICABLE FEDERAL REGULATIONS

As the type of establishment subject to petitioner's request is and underground mine, the federal agency having jurisdiction over safety and health of employees is the Mine Safety and Health Administration (MSHA). The standards applicable to this type of equipment can be found in 30 CFR Subpart L (linked below), and they require compliance with consensus standards.

4.0 HISTORY OF 462(m)(3)

Prior to an amendment of 462(m) on April 8, 1992 no standard existed for using thermoplastic materials including polyethylene, reinforced nylon or ABS in compressed air piping systems.

Duraplus Thermoplastic Piping Systems a manufacturer of PE pipe filed Petition 184 on January 4, 1985 to amend Title 8 462(m) to include the above mentioned materials. A Plastic Pipe Advisory Committee held three meetings, the first convened on October 3, 1989. The committee had representation from the State of California Standards Board, State of California Pressure Vessel Unit, four members from the PE pipe manufacturing industry, Factory Mutual and City of Los Angeles Dept. of Building and Safety. Ultimately Title 8 462(m) was amended to include the use of PE pipe on April 8, 1992.

5.0 APPLICABLE CONSENSUS STANDARDS

There are no American Standards that address the use of thermoplastic materials for compressed air systems. However, the following Standards do exist for the use of thermoplastic material for natural gas, propane and propane/air mixtures.

- ASTM Designation No. D2513-86a,
- ASTM Designation No. D2444
- ASTM Designation No. D1598-86
- ASTM Designation No. D1599-86
- ASTM Designation No. F314-87a

Since no American Standard existed for using thermoplastic pipe with compressed air, in addition to the above standards, additional requirements for installation, testing, marking of pipe, valves and fittings and requirements for joining compounds were added to Title 8 Section 462(m) based on advisory committee recommendations.

Title 8 Section 560, Appendix C lists specific testing requirements for plastic pipe. It should be noted that Title 8 462(m)(3)(l) allows for the use of pipe that meets or exceeds the requirements in Appendix C. The Division accepts the testing requirements found in the above ASTM standards as meeting or exceeding those found in Title 8 Section 560, Appendix C.

6.0 PETITIONER'S BASIS FOR AMENDMENTS TO SECTION 462(m)

The petitioner states that their mine has at least fifteen miles of Polypropylene airlines. It is noted that the Original Sixteen to One Mine, Inc. was cited by Cal/OSHA Mining and Tunneling Unit prior to October 2016, for using plastic polyethylene pipe for compressed air that was marked for water service. The citation listed General violations of 462(m)(1)(A) thru (E) and (I).

The petitioner has not provided any specific amendments to 462(m). The petitioner has stated they want to "bring the outdated standard in compliance with the times". Therefore, it has been determined that no basis for amendments to Title 8 Section 462(m) have been provided.

7.0 DIVISION'S ANALYSIS

The petitioner has not provided a basis for, nor any specific amendment to Title 8 462(m). The petition appears to be the result of a Cal/OSHA Mining and Tunneling citation. The petitioner would like a change in Title 8 462(m) that will allow continued use of fifteen miles of pipe marked for water use currently in compressed air service. The continued use of PE pipe that does not comply with Title 8 462(m) may be handled through a variance application.

8.0 DIVISION'S CONCLUSION

The Division of Occupational Safety and Health (Cal/OSHA) has reviewed the petitioner's request for changes to Title 8, Section 462(m). The review included information provided in the petitioner's application, phone conversations with the petitioner, emails with the petitioner, and a research of existing regulations and consensus standards. The Division of Occupational Safety and Health recommends that the petition be Denied.