



Pumpkin Hollow Project

October 24, 2019

Mine Safety & Health Administration
Office of Standards, Regulations, and Variances
201 12th Street South, Suite 4E401
Arlington, Virginia 22202-5450

RE: Docket No. MSHA-2018-0015

Dear Sheila McConnell,

Nevada Copper would like to submit comments regarding the Mine Safety and Health Administration's (MSHA) proposed Program Policy Letter (PPL) published in the Federal Register on July 29, 2019, discussing Escapeway and Refuge requirements under 30 C.F.R. § 57.11050.

30 C.F.R. § 57.11050, Escapeways and refuges, states:

- a) Every mine shall have two or more separate, properly maintained escapeways to the surface from the lowest levels which are so positioned that damage to one shall not lessen the effectiveness of the others. A method of refuge shall be provided while a second opening to the surface is being developed. A secondary escapeway is recommended but not required during the exploration or development of an ore body.
- b) In addition to separate escapeways, a method of refuge shall be provided for every employee who cannot reach the surface from his working place through at least two separate escapeways within a time limit of one hour when using the normal exit method. These refuges must be positioned so that the employee can reach one of them within 30 minutes from the time he leaves his workplace.

The stated purpose of the PPL is to provide guidance regarding the existing standard that requires refuges to protect underground M/NM miners in mines while a second escapeway is being developed or during the exploration or development of an ore body, and the location of such refuges. The PPL further states 57.11050 requires two or more separate, properly maintained escapeways in underground M/NM mines to enable miners to escape in an emergency and, when they cannot escape, the standard requires refuges to enable miners to shelter safely in place until they can be rescued.

MSHA has taken the position that the only two exception to the requirement that underground M/NM miners be provided at least two separate escapeways from their working places to the surface.

1. Miners must be provided a method of refuge while a second escapeway is being developed.
2. During the exploration or development of an ore body, a second escapeway is "recommended, but not required."

Nevada Copper, provides the following comments:

- Nevada Copper places the utmost importance on providing a safe working environment for our miners. Considerable amounts of time and financial resources are spent to protect the safety and health of our miners.
- To be clear, the standard at 57.11050 requires underground M/NM mines have two escapeways from the lowest levels of the mine and that a miner be able to reach the secondary egress or refuge within 30 minutes

from the time he leaves his working place. Nevada Copper does not agree with MSHA's interpretation of the standard that it requires two escapeways from every working place in the mine. This interpretation is a material change to the current rule, and as such, should go through notice and comment rulemaking as provided in the Federal Administrative Procedure Act. Following a formal rulemaking allows operators from across the country the opportunity to participate in the process and the agency to research and assess the potential impact of any proposed change.

- Nevada Copper, in agreement with Minearc's recommended maximum safe distance for nearest refuge chambers, supports that a risk assessment should be undertaken to establish the maximum distance separating a worker from a refuge chamber. The assessment should be based on how far a person, in a reasonable state of physical fitness, can travel at a moderate walking pace, using 50 percent of the nominal duration of the SCSR to reach the nearest refuge chamber. If it is assumed that workers are equipped with SCSRs of nominal 30-minutes duration, then no-one should be expected to walk more than 750 meters to reach the nearest refuge. This distance will be considerably reduced since an SCSR's duration may be adversely affected by factors such as:
 - the wearer's state (e.g. fitness, age, medical conditions, fatigue, agitation)
 - physical difficulties encountered (e.g. gradient, negotiating ladderways, climbing escapeways)
 - environmental conditions (e.g. temperature, humidity)
 - reduced visibility from smoke or dust that limits the rate of progress - this may necessitate the need to get down low or even crawl.
 - The ventilation practices at a mine may exacerbate the situation with respect to smoke and fumes
- Nevada Copper believes that a comprehensive risk assessment should be undertaken to determine the minimum safe distance for the location of a refuge chamber near an active working area, considering the potential for: entrapment, obstruction to work, exposure to radiated heat from an underground fire, damage from the effects of blasting. These scenarios will be influenced by factors such as: geotechnical stability and seismicity, fuel capacity of plant, size and composition of vehicle types, installation of fire suppression systems on plant and proximity to and energy blasts.
- MSHA consistently insists that operation and maintenance of equipment should be as per the OEM's recommended practices, then adopting changes to regulation that does not agree or conform with the OEM in the case of refuge chambers is inconsistent.
- Minearc, are regarded as the Industry Best Standard for mobile refuge chambers across the globe.
- Nevada Copper believes the rule as currently written is reasonable and effective in protecting the safety and health of miners in the event of an evacuation even underground. No change in the rule is necessary.
- MSHA has not provided any evidence that the current rule does not adequately protect miners. Nevada Copper requests MSHA provide detailed and verifiable justification for changing a rule that adequately protects miners.
- Again, the current rule requires a miner to be able to reach the secondary egress or refuge within 30 minutes from the time he leaves his working place. The walking pace for the average adult is approximately 3 miles per hour, or roughly 264 feet per minute on level ground. Even if a person's progress were slowed by uneven or inclined conditions to the relative pace of 1 mile per hour, that person would be traveling at a rate of roughly 88 feet per minute. Under those conditions, that person would still be able to travel approximately 2,640 feet in 30 minutes, almost twice the distance MSHA contemplates in the PPL. As such, the proposed 1500-foot limit is a significant reduction over the distance the current standard allows.
- Nevada Copper agrees that a mine specific approach should be utilized when considering escapeway access and refuge locations. The various mines in our state, and the numerous mines throughout our country, are

each unique and require different systems to adequately protect the safety of their employees in the event of an emergency. Nevada Copper recommends MSHA not require all mines to follow an arbitrary distance that may be unsuitable or inappropriate for some mines. Nevada Copper suggests mines be allowed to propose mine-specific distances that adequately reflect the actual needs present at each mine site.

- Finally, the PPL summarily dismisses the costs involved in considering escapeway access and refuge placement. The cost of developing additional egresses beyond those that have already been planned and mined to meet the existing regulation would be significant. Development costs are very often in excess of \$1,000 per foot and can be as high as \$4,000 per foot in some mines depending on ground conditions. The efforts and costs involved in the purchase, installation and maintenance of portable chambers is considerable.
- Just one, 12-man, 96-hour refuge station costs more than \$120,000. Hiring a contractor to cut a drift along with installation of infrastructure to the refuge would cost an additional \$197,000. In many cases, mines will have multiple active areas, compounding the above costs. Setting a minimum distance to a secondary egress or refuge will require operators to incur significant costs and may force some operations into financial hardship or closure. In addition to the one-time cost of installation there is also the effort required to inspect and maintain these refuges on an ongoing basis.

In closing, Nevada Copper recommends that should MSHA decide to move forward with changes to 30 C.F.R. § 57.11050, those changes should be done through the notice-and-comment rulemaking process as opposed to a PPL.

Thank you for the opportunity to provide comments regarding the proposed program policy letter.

Sincerely,



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Pumpkin Hollow Project

Enclosure: N/A

Cc: NCI, D. Swisher NCI, L. Sims NCI, W. Bond NCI, C. Schofield NCI, B. Morin

From: Lara Sims <lsims@nevadacopper.com>
Sent: Monday, October 28, 2019 3:57 PM
To: zzMSHA-Standards - Comments to Fed Reg Group
Cc: GoodGuidance; David Swisher; William Bond; Clint Schofield; Benjamin Morin
Subject: Nevada Copper Comments - Escapeways and Refuges in Underground Metal and Nonmetal Mines
Attachments: Nevada Copper Comments - MSHA Escapeways and Refuges in UG Metal Non Metal Mines 20191028.pdf

Please see the attached for comments from Nevada Copper regarding the Escapeways and Refuges in Underground Metal and Nonmetal Mines

Regards

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