DEPARTMENT OF LABOR

MINE SAFETY AND HEALTH ADMINISTRATION

30 CFR Parts 7 and 75

[Docket No. MSHA-2013-0033]

RIN 1219–AB79

Refuge Alternatives for Underground Coal Mines

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice of public meeting; reopening of record.

SUMMARY: The Mine Safety and Health Administration (MSHA) will hold a public meeting to gather information on issues and options relevant to miners’ escape and refuge. This meeting will supplement the information already received in response to the Agency’s Request for Information on Refuge Alternatives for Underground Coal Mines. This meeting provides coal mine operators, coal miners, manufacturers, academia and other interested stakeholders an opportunity to provide information concerning two critical issues: impediments to the use of built-in-place refuges and enhanced two-way voice communication when using escape breathing devices. This meeting also invites stakeholders to provide input on the current state of refuges in use and
recent research and new technology that may lead to the
development of a new generation of refuges. MSHA also is
reopening the record for public comment.

DATES: The public meeting will be held on October 19, 2015. All written submissions or responses for the record, including relevant data and information, must be received by midnight Eastern Standard Time on November 16, 2015.

ADDRESSES: The public meeting will be held at MSHA’s National Mine Health and Safety Academy, 1301 Airport Road, Beaver, West Virginia 25813-9426.

Requests to speak or make a presentation at the meeting may be made to Leah Davis at 202-693-9440 or by one of the following methods:

- Fax: 202-693-9441.
- Electronic Mail: davis.leah@dol.gov.

Instructions: All submissions must include RIN 1219-AB79 or Docket No. MSHA-2013-0033. Do not include personal information that you do not want publicly disclosed; MSHA will post all submissions without change to http://www.regulations.gov, including any personal information provided.
For additional instructions for participation in the public meeting, see the SUPPLEMENTARY INFORMATION section of this notice.

**Docket:** For access to the docket to read comments received, go to [http://www.regulations.gov](http://www.regulations.gov) or [http://www.msha.gov/currentcomments.asp](http://www.msha.gov/currentcomments.asp). To read background documents, go to [http://www.regulations.gov](http://www.regulations.gov). Review the docket in person at MSHA, Office of Standards, Regulations, and Variances, 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 in Suite 4E401.

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**FOR FURTHER INFORMATION CONTACT:** Sheila A. McConnell, Acting Director, Office of Standards, Regulations, and Variances, MSHA, at mcconnell.sheila.a@dol.gov (e-mail), 202-693-9440 (voice), or 202-693-9441 (facsimile). These are not toll-free numbers.
SUPPLEMENTARY INFORMATION:

I. Public Meeting

MSHA invites coal mine operators, coal miners, equipment manufacturers, academia, and the public to provide information on the current state of refuge alternatives, particularly on the challenges related to the use of built-in-place refuges, and enhancing voice communication when using escape breathing devices. MSHA especially invites coal miners and operators of small underground coal mines to participate.

The information from this meeting will supplement comments to the Agency’s Request for Information and research from the National Institute for Occupational Safety and Health (NIOSH). This meeting will focus on four primary issues: challenges related to built-in-place refuges; miners communicating while using breathing devices during escape; advantages and disadvantages of self-contained breathing apparatus (SCBA) with refill stations as an escape strategy; and the scope and status of new technology or recent research related to the installation and use of built-in-place refuges.

The public meeting will be held in the auditorium at MSHA’s National Mine Health and Safety Academy on October 19, 2015, beginning with Registration at 1 p.m. and
concluding at 5 p.m. or when the last speaker has spoken.

The meeting will be conducted in an informal manner. Presenters and attendees may provide written information to the court reporter for inclusion in the rulemaking record. MSHA will make the transcript of the meeting available on www.regulations.gov and on the Agency’s website at http://www.msha.gov/tscripts.htm and include it in the rulemaking record.

II. Background

Continued development of refuge equipment and technology is expected to enhance the effectiveness of refuges and improve miners’ chances of surviving a mine emergency when escape is impossible. Since the refuge alternatives rule became effective on March 2, 2009, stakeholders have gained experience, and research has led to some technological advancements and innovations. To benefit from this experience and research, on August 8, 2013, MSHA published a Request for Information (RFI) in the Federal Register (78 FR 48593) asking for data, comments, and information on issues and options that may present alternative or even more effective solutions for miners’ survival during underground coal mine emergencies than the protections provided by the existing rule.
In response to requests, MSHA extended the comment period four times to give interested parties additional time to review research reports from NIOSH and other relevant information and provide substantive comments. The comment period closed on April 2, 2015.

III. Questions and Issues for Discussion

A. Built-in-Place Refuge Alternatives

In its report, “Facilitating the Use of Built-In-Place Refuge Alternatives in Mines,” RI 9698, NIOSH makes recommendations on the use of built-in-place shelters, as a type of refuge with a superior environment when compared to tent and steel pre-fabricated structures. The report addresses three issues: (1) locating built-in-place refuges further from the face than the 1,000-foot limit required under the existing standard; (2) providing a consistent process for the design and approval of refuge stoppings; and (3) delivering a reliable supply of clean, breathable air to a built-in-place refuge. NIOSH recommends allowing operators to locate built-in-place refuges further than 1,000 feet from the face, but only if the refuges:

- Provide a constant supply of air into the refuge via either a protected compressed air line or a borehole from the surface.
• Provide a minimum of 85 cubic feet of space per occupant.

• Maintain the interior of the refuge under positive pressure when not in use to ensure that the refuge contains breathable air immediately on entry and to keep contaminated air from entering the refuge when miners enter.

MSHA invites comments and information on the following issues:

1. How would MSHA’s acceptance of built-in-place refuges located further from the face and meeting the above criteria affect your decision on whether or not to install a built-in-place refuge? Discuss the relative merits of location versus design and performance. Please comment on the advantages and disadvantages of NIOSH’s recommended approach for built-in-place refuges; the feasibility of installing built-in-place shelters in different mine settings; the risks related to a refuge location that is further away from the working face; and the benefits of a built-in-place refuge’s environment and performance characteristics.

2. Discuss the advantages and disadvantages of the following methods of providing breathable air in refuges: using supplied air from the surface versus using air from
cylinders stored underground; or delivering surface-supplied air through a borehole directly into a built-in-place refuge versus compressed air lines run through the mine.

3. Discuss options for piping air over several miles through a mine to provide a clean air supply and sufficient air pressure to a built-in-place refuge when a borehole directly into the refuge is unavailable. What issues remain to be addressed for the protection of piping used to provide compressed air to a refuge?

4. What are the risks and benefits to miners’ safety, if any, if a constant air supply from the surface is provided to a refuge and exhausted from the refuge into the mine, as opposed to exhausting to the surface?

5. What are the advantages and disadvantages of using SCBAs with refill stations as compared to using SCSRs with caches in escapeways?

6. Discuss and describe new and improved technology for built-in-place refuges’ designs. What is the impact of these designs on the cost of built-in-place refuges? For example, would a moveable wall or other modular design make the use of a built-in-place refuge more feasible and economical?
B. Miners' Ability to Communicate During Escape

Miners' ability to communicate with each other can be critical during mine emergencies. Under existing rules, miners use self-contained self-rescue (SCSR) escape respirators that have a mouthpiece. A self-contained breathing apparatus (SCBA) has a full-face respirator mask. Miners must remove the mouthpiece of an SCSR to speak, or remove the full-face respirator mask of an SCBA to communicate clearly. These actions expose miners to deadly gases in the mine atmosphere.

7. Discuss the challenges associated with providing two-way communication when using escape SCBAs or SCSRs. What technologies, such as voice amplifiers or wireless communication systems, are available for escape SCBAs or SCSRs that can enhance voice communication among miners?

8. Discuss how this technology can be integrated with a mine’s two-way post-accident communication system.

MSHA will accept written responses, data, and information for the record from any interested party, including those not participating in the public meeting, through November 16, 2015.

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Joseph A. Main,
Assistant Secretary of Labor for
Mine Safety and Health.