

ISRP 1999 abstract

Presenter/author	Title	Abstract
Kyriazi, Nicolas Shubilla, J. P. <i>NIOSH-Pittsburgh Research Laboratory P.O. Box 18070 Pittsburgh, PA 15236 USA</i>	Self- Contained Self-Rescuer Field Evaluation: Sixth-Phase Results	The U.S. National Institute for Occupational Safety and Health, Pittsburgh Research Laboratory (PRL) (formerly part of the U.S. Bureau of Mines) has undertaken a study to determine how well self-contained self-rescuers (SCSRs), deployed in U.S. underground coal mines in accordance with Federal regulations (30 CFR 75.1714), held up in the underground environment with regard to both physical damage and aging. This report presents findings regarding laboratory-tested SCSRs in the sixth phase of testing from mid-1996 to early 1998. This SCSRs were tested on human subjects (10%) and on a breathing and metabolic simulator (90%). These results indicate that most of the apparatus, if they pass their inspection criteria, perform satisfactorily. However, several MSA Portal-Packs were found to have K02 dust in their mouthpieces. Since there was apparently no way to distinguish good from bad apparatus, NIOSH-Morgantown and MSHA, after finding more instances of this problem, decided to decertify the Portal-Pack. In addition, deployed CSE SR-100s exhibited significantly higher inhaled CO2 levels than new units, as they did in the previous phase. This will cause higher ventilation rates in most users which will, in turn, result in higher breathing pressures possibly causing users to prematurely remove the apparatus. Steps are being taken to ensure that affected apparatus are removed from service.