

Diesel Particulate Matter in Underground Coal Mines Training Program Guide

INTRODUCTION

This guide is designed to assist coal mine operators and independent contractors that are covered by 30 CFR Section 72.510 (the miner health training regulations for diesel particulate matter) in developing effective mine-specific training programs. The target audience for this guide is the persons who will be providing this training at the mine.

Use of this guide is strictly voluntary, and you are encouraged to modify the program to meet your own specific needs. Teaching methods were chosen to closely match established methods people use to train employees. Paperwork has been kept to a minimum. Most of the required training can be taught on-site with minimal cost and with minimal disruption.

The training required by Part 72 can be conducted within a Part 48 training program, such as annual refresher training, or as a separate program. If you choose to incorporate this training into Part 48, you will be required to submit a revised training plan to the appropriate MSHA district office for approval. Further, all applicable Part 48 requirements will have to be met. If conducted separately from Part 48, there are no specifications on trainer qualifications, no minimal training time, and no training plans. In either case, you must make a record of the training. However, if the training is within Part 48, you must use MSHA Form 5000-23 to record the training. This guide is designed to be used whether you choose to conduct the training under Part 48 or as a separate program.

This guide leads you in preparing your own class by providing a lesson plan outline with teaching objectives, training materials, topics/areas to cover, and suggestions for evaluating the effectiveness of the training.

A copy of the guide is found on the MSHA Internet home page at www.msha.gov. The guide can be downloaded and the electronic copy revised for additional space or to input your mine specifics. You can also develop your own program using this guide as an outline.

Diesel Particulate Matter 30 CFR Part 72 Training Program Guide

Note to mine operator/instructor: The person conducting the training is expected to be familiar with the basic requirements of Section 72.510. The following guidelines will help you gain a better understanding of the training requirements. For additional information, please refer to the text of the regulation. The following lesson plan can be used as a model to train miners for the indicated Part 72 training. This training is provided annually to all miners at a mine who can reasonably be expected to be exposed to diesel emissions on that property. A record of the training must be completed and retained for 1 year after completion of the training.

Lesson Plan Outline

Introduction

The purpose of this course is to increase underground coal miners awareness of the hazards associated with exposure to diesel particulate matter and the control systems utilized at the mine to reduce such exposure.

The objectives of the training are to:

- Explain health risks associated with exposure to diesel particulate matter (DPM);
- Describe the methods used at the mine to control DPM concentrations;
- Identify the personnel responsible for maintaining those controls; and
- Describe actions miners must take to ensure the controls operate as intended.

Some Suggested Training Materials:

- MSHA-produced publication "Practical Ways to Reduce Exposure to Diesel Exhaust in Mining--A Toolbox," 1997
- Company safety and health procedures/reporting, including responsible persons
- 30 CFR Sections 72.500 - 72.520 and associated preamble

Topics/Areas:

- Health risks associated with exposure to DPM. Exposure may cause “acute” effects, such as eyes burning, throat burning, susceptible to colds/influenza, and other respiratory illness; and “chronic” effects, such as heart risks, and suspected carcinogen for lung cancer.
- DPM control methods at your mine. For each engine listed on the Diesel Equipment Inventory, go over the approved engine operating specifications, type of filters, any other control methods. Use and define terms that identify the equipment, location and operations so the miner will be able to understand and communicate problems accurately with other miners and the designated responsible person.
- Person responsible for maintaining DPM controls. For each shift (as applicable), identify the responsible person for reporting any problems, including the company’s procedures.
- Actions to ensure DPM controls operate properly. Point out general operating parameters and the possible hazards associated with each item. Equipment review/inspection may include communication with previous equipment operator, checking filter indicator, direct examination of filters, and review of maintenance records.

Allow time for questions.

Evaluation

Ask the miner to identify any potential health risks that he/she can be exposed to at the work site. Discuss these ideas with the miner and how the miner could avoid being hurt by the health hazard. Ask the miner to summarize what he/she has learned about each of the major areas. Correct any confusion or misunderstanding. Have the miner relate to actual machines, processes, controls, etc., wherever possible.