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I. INTRODUCTION

Noise, or unwanted sound, is one of the most common occupational hazards in American workplaces. The National Institute for Occupational Safety and Health (NIOSH) estimates that 30 million workers in the United States are exposed to hazardous noise. Exposure to high levels of noise may cause hearing loss, create physical and psychological stress, reduce productivity, interfere with communication, and contribute to accidents and injuries by making it difficult to hear warning signals.

This chapter provides technical information and guidance to help Compliance Safety and Health Officers (CSHOs) evaluate noise hazards in the workplace. The content is based on currently available research publications, OSHA standards, and consensus standards.

The chapter is divided into six main sections. Following this introduction, the second section provides background information about noise and noise regulations and an overview of noise controls. The third section describes worksite noise evaluations, including noise measurement equipment, noise evaluation procedures, and noise sampling. The fourth section offers investigative guidelines (including methods for planning the investigation) and outlines a strategy for conducting noise evaluations. The fifth section describes noise hazard abatement and control, including engineering and administrative controls, hearing protection, noise conservation programs, cost comparisons between noise hazard abatement options, and case studies. The final two sections provide references used to produce this chapter and resources for obtaining additional information. Following the main sections, the appendices provide a glossary of terms, sample calculations, and expanded discussion of certain topics introduced in the chapter.