Weekly Safety Tip

A Back-to-Basics Overview of OSHA Guidance on Incident Investigation

SAFETY TIPS

OSHA on Incident Investigation

Safety Council OF NORTHWEST OHIO

A Back-to-Basics Overview of OSHA Guidance on Incident Investigation

OSHA strongly encourages employers to investigate all incidents in which a worker was hurt, as well as close calls (AKA "near misses"), when a worker might have been hurt if the circumstances had been slightly different.

In the past, the term "***accident***" was often used when referring to an unplanned, unwanted event. To many, "*accident*" suggests an event that was random, and could not have been prevented. Since nearly all worksite fatalities, injuries, and illnesses are preventable, **OSHA suggests using the term "incident" investigation.**

Investigating a Worksite Incident

Investigating a worksite incident- a fatality, injury, illness, or close call- provides employers and workers the opportunity to identify hazards in their operations and shortcomings in their safety and health programs. Most importantly, it **enables employers and workers to identify and implement the corrective actions necessary to prevent future incidents.**

Incident investigations that focus on identifying and correcting root causes, not on finding fault or blame, also improve workplace morale and increase productivity, by demonstrating an employer's commitment to a safe and healthful workplace.

Incident investigations are often conducted by a supervisor, but to be most effective, investigations should include managers and employees working together, since each bring different knowledge, understanding and perspectives to the investigation.

In conducting an incident investigation, the team must **look beyond the immediate causes of an incident.** It is far too easy, and often misleading, to conclude that carelessness or failure to follow a procedure alone was the cause of an incident. To do so fails to discover the underlying or root causes of the incident, and therefore fails to identify the systemic changes and measures needed to prevent future incidents. When a shortcoming is identified, it is important to ask why it existed and why it was not previously addressed.

For example:

- If a procedure or safety rule was not followed, ***why*** was the procedure or rule not followed?
- Did production pressures play a role; if so, ***why*** were those pressures allowed to jeopardize safety?
- Was the procedure out-of-date or safety training inadequate? If so, ***why*** had the problem not been previously identified, or, if it had been identified, why had it not been addressed?

The examples illustrate it is essential to discover and correct all the factors contributing to an incident, which **typically involve equipment, procedural, training, and other safety and health program deficiencies.**

Addressing underlying or root causes is necessary to truly understand why an incident occurred, to develop effective corrective actions, and to minimize or eliminate serious consequences from similar future incidents.

OSHA's cited Additional Resources

To assist employers and workers in conducting effective incident investigations, and to develop corrective action plans, the following resources can help:

- OSHA Fact Sheet. Root Cause: The Importance of Root Cause Analysis During Incident Investigation.(2016). This fact sheet provides guidance for identifying root causes of incidents and/or near misses in order to prevent their recurrence.
- OSHA. Incident [Accident] Investigations: A Guide for Employers. (2015). Provides employers with a systems approach to identifying and controlling the underlying or root causes of all incidents in order to prevent their recurrence.
- National Safety Council. How to conduct an incident investigation. (2014). This four-page guidance document, developed by the OSHA/NSC National Alliance, provides brief guidance on conducting an incident investigation.
- Washington State Department of Labor & Industries. Accident Investigation Basics. (2009).

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Weekly Safety Share

Individual Fit-Testing Recommendation for Hearing Protection Devices

SAFETY & HEALTH SHARE

Individual Fit-Testing Recommendation for Hearing Protection Devices

The following describes the NIOSH policy for determining the attenuation provided by hearing protection devices for individual workers. This statement serves as an update to the 1998 NIOSH Criteria for a Recommended Standard—Occupational Noise Exposure.

Recommendation

NIOSH recommends employers use individual, quantitative fit testing to evaluate the attenuation received by workers from their hearing protection devices.

Quantitative fit testing is the physical or psychophysical measurement of noise/sound attenuation provided by a hearing protector. Fit testing results in an objective Personal Attenuation Rating (**PAR**) that accurately reflects the level of sound reduction an individual worker receives while wearing a specific hearing protector or it indicates an individual has achieved a specified level of protection.

Employers should integrate individual fit testing into their hearing loss prevention programs.

Background

In the 1998 ***NIOSH Criteria for a Recommended Standard—Occupational Noise Exposure***, NIOSH stated that "… ideally, workers should be individually fit tested for hearing protectors". However, commercially available fit-test systems were not available in 1998. Therefore, NIOSH instead recommended **derating the manufacturer's labeled noise reduction rating to estimate a worker's "as worn" hearing protector attenuation**.

Since 1998, advances in research and technology have made it possible to quickly check the attenuation that each worker receives from their preferred hearing protection devices at the worksite. Several hearing protector fit-test systems are now available. An Acoustical Society of America/ American National Standards Institute (ASA/ANSI) standard specifying performance criteria for the equipment and a method for computing a PAR is available [ASA/ANSI 2018].

NIOSH has developed, researched, and promoted advancements in hearing protector fit-testing technology for decades. NIOSH research demonstrated that **laboratory based hearing protector ratings overestimate worker protection in the field** [NIOSH 1982], that derating schemes for hearing protectors cannot assess "proper fit" [Murphy et al. 2022], and that individualized training is necessary for fit testing to improve the attenuation workers achieve [Morata et al. 2024]. **Therefore, NIOSH recommends individual, quantitative fit testing of hearing protection in lieu of the derating scheme.**

Hearing protector fit testing provides a personal noise reduction value for each worker wearing a particular hearing protector. This policy statement clarifies that NIOSH recommends hearing protector fit testing as an essential practice to ensure that hearing protection devices are properly fit to each worker.

While NIOSH recommends the use of individual hearing protector fit testing in the field as a best practice for employers, **NIOSH does not favor any particular fit-testing method**.

Systems that compute a PAR by the most current ASA/ANSI standards meet this NIOSH recommendation.

In addition, any technology that directly measures and documents a worker's protected exposure level (e.g., real-time protected exposure level monitoring) is consistent with this recommendation.

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