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Occupational Safety and Health Standards Board  
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OCCUPATIONAL SAFETY AND HEALTH  
STANDARDS BOARD

BOARD STAFF'S REVIEW OF  
PETITION FILE NO. 546

Petitioner: Steeve Inagaki, P.E.

Submitted by: Michael Nelmidia  
Title: Senior Engineer-Standards  
Date: June 5, 2015

## INTRODUCTION

On January 23, 2015, the Occupational Safety and Health Standards Board (Board) received a petition dated January 18, 2015 from Mr. Steeve Inagaki P.E. (Petitioner).

Labor Code Section 142.2 permits interested persons to propose new or revised regulations concerning occupational safety and health and requires the Board to consider such proposals and to render its decision no later than six months following receipt. In accordance with Board policy, the purpose of this evaluation is to provide the Board with relevant information upon which to base a reasonable decision.

The Petitioner requested that the Board amend Title 8 California Code of Regulations (CCR) Section 8407 of the Tunneling Safety Orders. Specifically, the Petitioner requests that employers provide tunnel safety refresher training every 5 years for the following topics:

1. Ventilation
2. Recognition of Hazardous Atmospheres
3. Illumination
4. Communications
5. Mechanical Equipment
6. Personnel Protective Equipment
7. Explosives (if applicable)
8. Fire Prevention and Protection
9. Emergency Procedures including evacuation plans and
10. Check-in/check-out system

## HISTORY

Board Staff found no prior requests to include refresher training for the Tunneling Safety Orders (TSO). The Tunneling Safety Orders are being updated at this present time by the Division's Mining and Tunneling Unit. The proposal by the Petitioner was brought to the attention of the Principal Safety Engineer for the Mining and Tunneling Unit for evaluation prior to filing the request with the Occupational Safety and Health Standard Board (Board). The Principal Safety Engineer recommended that the Petitioner file a petition with the Standards Board.

## REASON FOR THE PETITION

Title 8 Section 8407(a) requires:

*When an employee is first hired, or assigned to a new task, the person in charge shall determine the extent of the employee's experience and instruct him/her in recognition of any hazardous conditions present and the protective measures to be taken to eliminate the hazards associated with underground construction activities including, where appropriate, the following subjects.*

*(1) Air Monitoring;*

- (2) *Ventilation;*
- (3) *Illumination;*
- (4) *Communications;*
- (5) *Ground Control;*
- (6) *Flood Control;*
- (7) *Mechanical Equipment;*
- (8) *Personal Protective Equipment;*
- (9) *Explosives;*
- (10) *Fire Prevention and Protection; and*
- (11) *Emergency Procedures, including evacuation plans and a check-in/check-out system.*

The Petitioner raises as an issue, that the current standard, Section 8407, does not require employers to retrain employees after the employees have received initial training.

The Petitioner highlights:

1. tunnel related incidents in 1971, 1990, and 1995 in Los Angeles, CA as a warning that accidents do occur in tunnel construction;
2. the different trades typically involved in tunneling work; and
3. an instance where an employee expressed concerns over the absence of refresher training.

The Petitioner contrasts refresher training required of miners, governed under Federal Mine Safety and Health Administration (MSHA) with the lack of these requirements in tunneling. Miners are required to be retrained annually. The trades performing tunneling work are exposed to the same/similar hazards as those as miners are exposed to and are under lesser requirements to keep their training current/up-to-date. The Petitioner states in his petition, that the only training provided by one of his former employers was the initial training required under Section 8407(a). In a subsequent telephonic discussion, the Petitioner reasoned that providing retraining to employees advances their knowledge of new technologies, techniques, and safety measures—thus increasing the employee’s awareness of hazards and means to protect themselves from those hazards.

#### NATIONAL CONSENSUS STANDARD

There are no National Consensus Standards governing underground constructions.

## FEDERAL STANDARDS

Federal OSHA Publication (OSHA 3114-06R, 2003) states the following:

*The OSHA underground construction regulation (29 CFR 1926.800) applies to the construction of underground tunnels, shafts, chambers, and passageways. It also applies to cut-and cover excavations connected to ongoing underground construction as well as those that create conditions characteristic of underground construction. These hazards include reduced natural ventilation and light, difficult and limited access and egress, exposure to air contaminants, fire, flooding, and explosion. The regulation does not apply to excavation and trenching operations for above ground structures that are not physically connected to an underground construction operation or to underground electrical transmission and distribution lines.*

The training provisions under 1926.800(d) require:

*Safety instruction. All employees shall be instructed in the recognition and avoidance of hazards associated with underground construction activities including, where appropriate, the following subjects:*

*1926.800(d)(1) Air monitoring:*

*1926.800(d)(2) Ventilation:*

*1926.800(d)(3) Illumination:*

*1926.800(d)(4) Communications:*

*1926.800(d)(5) Flood control:*

*1926.800(d)(6) Mechanical equipment:*

*1926.800(d)(7) Personal protective equipment:*

*1926.800(d)(8) Explosives:*

*1926.800(d)(9) Fire prevention and protection: and*

*1926.800(d)(10) Emergency procedures, including evacuation plans and check-in/check-out systems.*

The Federal Standard does not require retraining or refresher training of employees.

## DIVISION EVALUATION

The Division, in their evaluation dated May 14, 2015, recommends the denial of the petition on the grounds that “frequent training is required by existing regulations.”

## BOARD STAFF EVALUATION

Board Staff reviewed the requirements under the TSO and the General Industry Safety Orders (GISO). The retraining of employees is not specifically required within the Tunneling Safety Orders.

Section 8407(a) requires the “person in charge” to perform two duties. The first duty is to examine the extent of the employee’s experience. The second is to instruct the employee in the recognition of hazardous conditions and the protective measures to address the hazardous conditions. Section 8407(a) may be interpreted as two independent duties. Where the duties are viewed as independent, the “person in charge” would cover all topics “where appropriate”. The “person in charge” would then use the employee’s experience for a separate purpose, such as job assignment.

Another interpretation infers that the two duties are viewed in conjunction with each other. The “person in charge” would use the employee’s experience as the basis to forego or abbreviate instructions of topics an employee has already received, while emphasizing topics where the employee’s training was deficient. From the perspective of those implementing Section 8407(a), a “person in charge” to determine all of the different aspects of tunneling requirements that have changed over the course of an employee’s career, would require an exhaustive inquiry into the employee’s background and knowledge/experience with the state-of-the-art methods and technologies. The ‘determination’ requirement parallels the Mine Safety Orders under Section 6963. In both the Mine Safety Orders and the Tunnel Safety Orders, the “person in charge” instructs the employee on the ‘hazards’ of the employee’s “job” or “activity”. The term “person in charge” is not defined in Section 8405; the definitions section. The Tunnel Safety Orders directs the “person in charge” to provide training where appropriate on the following topics:

- (1) Air Monitoring;*
- (2) Ventilation;*
- (3) Illumination;*
- (4) Communications;*
- (5) Ground Control;*
- (6) Flood Control;*
- (7) Mechanical Equipment;*
- (8) Personal Protective Equipment;*
- (9) Explosives;*
- (10) Fire Prevention and Protection; and*
- (11) Emergency Procedures, including evacuation plans and a check-in/check-out system.*

Any retraining on the above topics is only provided when the “person in charge” deems it appropriate (discretionary). In contrast, the Mine Safety Health Administration (MSHA) requires employees receive annual refresher training. It is important to note, that MSHA requirements are not binding on tunneling work. Tunneling activities are outside of the scope of

MSHA requirements. The MSHA requirements cannot be relied upon to require refresher training to employees performing tunneling work.

The only other Section of Title 8 applicable where retraining is specifically mentioned is within the ‘compliance’ section of the Injury and Illness Program (IIPP) under 3203(a)(2) of the General Industry Safety Orders:

*...Substantial compliance with this provision includes ... training and retraining programs. ... **or** any other such means that ensures employee compliance with safe and healthful work practices.[Emphasis added]*

Retraining is one of multiple means an employer may use to comply with Section 3203(a)(2). Section 3203(a)(2)’s use of “or” to separate each provisions listed for substantial compliance does not compel an employer to provide “retraining” (see Shimmick-Obayashi DAR 08-5023 through 5025).<sup>1</sup> As inferred from this DAR, any reliance on the requirements of the IIPP, would fall short of requiring an employer “retrain” their employees. Retraining, if deemed to be required, must be codified as its own standard or require changes to 3203(a)(2) itself.

Within the Tunneling Safety Orders, retraining is only required under Section 8430(i). Under Section 8430(i), employees are required to be retrained regarding self-rescue devices every three months. Retraining or refresher training is not uncommon in Title 8. Retraining or refresher training is required in a number of standards within Title 8 related to powered industrial truck operations, hazardous waste and emergency operations (Hazwoper), and Hazcom.

A common misinterpretation is that employees need only be trained once—initial training. It is important to recognize, under the Injury and Illness Prevention Program, employees are required to be trained when specific circumstances occur even after being hired. Under Section 3203(a)(7) the program shall require:

*(7) Provide training and instruction:*

*...*

*(C) To all employees given new job assignments for which training has not previously been received;*

*(D) Whenever new substances, processes, procedures or equipment are introduced to the workplace **and** represent a new hazard; [emphasis added]*

*(E) Whenever the employer is made aware of a new or previously unrecognized hazard;*

Under the current standards if the workplace or work environment is static, employee retraining is not mandated. If an employee has been trained by their employer to safeguard themselves from each hazard in accordance with 3203(a)(7), then the employee would not be subjected to subsequent retraining—if those workplace hazards and sources of hazards remain unchanged. While this may be true for some workplaces, tunnels and tunneling technology is innovatively

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<sup>1</sup> As stated in *Marine Terminals Corp.*, “the Division must show that Employer did not comply with *any* of the four listed options under section 3203(a)(2).”

dynamic and has evolved significantly over the last 40 years. For example, tunnel boring machines and tunnel support/casing systems are more advanced than their 1970's counterparts. The chemicals used in the repair casings have changed. The acceptable levels of airborne contaminants have decreased (permissible exposure limits). In each of these cases, a proper implementation of the 3203(a)(7), requires an employer to identify and provide training to all employees exposed when each "new hazard" is introduced in to the workplace.

While most tunneling project would be completed short of the 5-year cycle proposed by the Petitioner, tunnel renovation and repair are still within the scope of the TSO. Those performing alteration, renovation, or repair of tunnels may work at the same workplace for many years and not undergo refresher training or even a 'determination' under Section 8407(a). The Petitioner's stated goal did not explicitly include the retraining of employees engaged in the alteration, renovation or repair of tunnels. However Board staff expanded the evaluation to include these activities. Refresher training would benefit those that perform alteration, renovation, or repair of tunnels more than those engaged in tunnel construction.

### RECOMMENDATIONS

Board Staff (staff) recommends that the Petition be GRANTED, to the extent that an advisory committee be convened by staff to examine the necessity for rulemaking based on input from stakeholders to:

1. discuss the necessity for rulemaking, for refresher training of employees who conduct tunnel alteration, renovation, and repair;
2. discuss a definition for the term "person in charge" and the qualifications a "person in charge" must possess to "determine the extent of the employee's experience" under Section 8407(a). The options to be considered should include the substitution of previously defined terms such as "Safety Representative" (see Section 8406(f)), "competent person", or "qualified person" which have pre-defined qualifications and authority.

Any consensus proposal, resulting from the advisory committee deliberations, would be brought to the Board and the public for consideration at a future public hearing. The Petitioner should be extended an invitation to participate in the advisory committee deliberations.