



December 3, 2010

U.S. Department of Transportation
Docket Operations
West Building, Ground Floor
Room W12-140
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: FRA Docket No. FRA-2009-0044

Submission via electronic means

Docket Officer:

The American Industrial Hygiene Association (AIHA) expresses its appreciation to the Federal Railroad Administration (FRA) for the opportunity to provide these comments on the notice of proposed rulemaking (NPRM) to amend regulations related to occupational safety and health in locomotive cabs. The NPRM was published in the Federal Register on October 5, 2010, page 61386.

With more than 10,000 members, the AIHA is an international professional and scientific association dedicated to the elimination of environmental and occupational disease. AIHA and our members are committed to protecting and improving worker health and safety, and the health, safety and well-being of everyone in our communities.

AIHA appreciates the opportunity to work with the FRA to help achieve the mutual goal of protecting workers and we look forward to further opportunities to work with the FRA on this and similar issues and regulatory priorities.

If AIHA can be of any further assistance, please contact me. Thank you.

Sincerely,

Michael T. Brandt, DrPH, CIH, PMP
AIHA President

American Industrial Hygiene Association

Comments On

Notice of Proposed Rulemaking

Emergency Escape Breathing Apparatus Standards

Docket No. FRA-2009-0044

The American Industrial Hygiene Association (AIHA) believes that the Federal Railroad Administration (FRA) proposed Emergency Escape Breathing Apparatus (EEBA's) proposed pre-trip inspection and related documentation is unnecessary and overly burdensome.

EEBA's have been used in the Chemical, Paper, Mining and Maritime industries for several decades. Based on several decades of deployment and use of EEBA's in these industries, inspection frequencies of 30 – 90 days have proven sufficient to ensure that the devices are in working order and capable of providing emergency protection for escape from hazardous atmospheres.

Because of this long history of successful use in other industries, AIHA believes the FRA should propose a performance-based inspection criteria that would allow companies to work with the EEBA manufacturer to develop an inspection protocol that would afford the highest level of assurance that the devices are in working order, while minimizing the administrative paperwork burden that would be created by the current prescriptive requirements proposed by the FRA.

A performance-based standard focuses on attaining specific objectives, while allowing the group regulated by the standard to determine how best to meet the standard within their unique operating environment. The attributes of a performance-based standard is that it provides measures of success, both qualitative and quantitative for an inspection program. Many compliance standards only focus on the things that can go wrong and attempt to build barriers to prevent these potential failures. This approach usually leads to inefficiencies because they assume a one-sized-fits-all mentality. As a result, they can be overly burdensome in many situations because the barriers are greater in number and stringency than they need to be to provide a reasonable assurance of success in all situations.

Many of the EEBA's reviewed by the Class I roads are manufactured in such a way that a quick visual inspection can provide the crew with assurance that it is in working order. They are sealed in an air tight water resistant container meeting U.S. Navy and Maritime industry specifications for storage. The container has been tested to hold up in the harshest environments, e.g., salty air, missile attack, high temperatures and vibration, fire, and toxic atmospheres. Based on the attributes of the container the EEBA is placed in, a daily inspection of the contents of the container would not be advisable. In fact, it may actually result in an increase in failure rate due to potential damage to the EEBA by breaking a seal.

To facilitate an easy visual inspection without opening the container, they are designed so that the entire contents of the container can be viewed through the clear housing. The oxygen or air content can be easily viewed on a gauge similar to the gauge on a fire extinguisher. Based on these attributes, a train crew would quickly ascertain the condition and readiness of their units, without the need to either remove or inspect the unit.

As for documenting this visual inspection, AIHA does not believe that the addition of a pre-trip inspection sheet will do anything but create an administrative burden on the railroad. Based on our review of the programs administered by the Occupational Safety and Health Administration (OSHA), Mine Safety and Health Administration (MSHA) and the Maritime industry, a pre-trip inspection is both unnecessary and unwarranted. In support of our position, below are the relevant references to these standards.

OSHA regulates the majority of the devices used in the U.S. today. The OSHA respiratory protection standard mandates monthly inspection of respirators used for emergency escape:

1910.134(h)(3)(i)(B)

All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use; and

1910.134(h)(3)(i)(C)

Emergency escape-only respirators shall be inspected before being carried into the workplace for use.

1910.134(h)(3)(ii)

The employer shall ensure that respirator inspections include the following:

1910.134(h)(3)(ii)(A)

A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters; and

1910(134)(h)(3)(ii)(B)

A check of elastomeric parts for pliability and signs of deterioration.

The United States Navy began requiring that EEBA's be placed in and around engine rooms aboard their vessels in 1982. They currently have about 427,000 EEBA's aboard their vessels to protect crew members in the engine compartments escape from fires and other emergencies. They have an inspection standard that requires monthly inspections similar to the OSHA requirement. Their inspection criteria states:

Paragraph B0609.a. of OPNAVINST 5100.19E addresses shipboard respirator inspection and is reproduced below:

- a. Inspections. All respirators shall be inspected routinely before and after each use. Emergency use respirators shall be inspected after each use and at least monthly. Emergency respirator inspection records must be maintained for the life of the respirator. SCBAs shall be inspected periodically to ensure proper function during an emergency response and after each use and at least monthly. Follow manufacturer's recommendations for respirator inspection.

Another area where there is widespread use of EEBA's is in the mining industry. In 1981 MSHA began requiring that mines install and maintain EEBA's for protection of miners in emergencies including fires and entrapment. Currently there are about 200,000 EEBA's used by mining companies in the US. The MSHA standard for these self-rescue devices requires inspections of these devices at two different frequencies:

- 1) daily if carried by the worker, and
- 2) at intervals not exceeding 90-days if they are mounted on equipment or fixtures in the mine.

Below is the wording from the MSHA regulation:

30 CFR § 75.1714-3

Self-rescue devices; inspection, testing, maintenance, repair, and recordkeeping.

- (a) Each operator shall provide for proper inspection, testing, maintenance, and repair of self-rescue devices by a person trained to perform such functions.
- (b) After each time a self-rescue device is worn or carried by a person, the device shall be inspected for damage and for the integrity of its seal by a person trained to perform this function. Self-rescue devices with broken seals or which are damaged so that the device will not function properly shall be removed from service.
- (c) All FSRs approved by MSHA and NIOSH under 42 CFR part 84, except devices using vacuum containers as the only method of sealing, shall be tested at intervals not exceeding 90 days by weighing each device on a scale or balance accurate to within +1 gram. A device that weighs more than 10 grams over its original weight shall be removed from service.
- (d) All SCSRs approved by MSHA and NIOSH under 42 CFR part 84 shall be tested in accordance with instructions approved by MSHA and NIOSH. Any device which does not meet the specified test requirements shall be removed from service.
- (e) At the completion of each test required by paragraphs (c) and (d) of this section the person making the tests shall certify by signature and date that the tests were done. This person shall make a record of all corrective action taken. Certifications and records shall be kept at the mine and made available on request to an authorized representative of the Secretary.
- (f) Self-rescue devices removed from service shall be repaired for return to service only by a person trained to perform such work and only in accordance with the manufacturer's instructions.

[43 FR 54246, Nov. 21, 1978, as amended at 47 FR 14706, Apr. 6, 1982; 56 FR 1478, Jan. 14, 1991; 60 FR 30398, June 8, 1995; 60 FR 33719, June 29, 1995]

There are a number of other respirator standards that recommend monthly inspection of emergency use respirators:

- NFPA 1500
- ANSI Z88.2

In addition to the OSHA requirement for monthly inspection of respirators used for emergency escape, there are a number of other standards that require monthly inspection of other emergency equipment (e.g. Eye Wash, Safety Showers, and Fire Extinguishers):

- 29 CFR 1910.151
- ANSI/ISEA Z358.1-2009
- 29 CFR 1910.157
- ANSI/NFPA 10

The EEBA's by nature of their design are easy to inspect and verify that they are in working order. Most of them have a visual indicator of air or oxygen content or an end of service life indicator. These gauges are very much like the gauge on a fire extinguisher and indicate the acceptable range for a green zone and an out-of-service range indicated by a red zone. Because the devices are housed within a tamper resistant case with a break-away tag, it makes it easy to discern if one is ready for use or if it has been opened and possibly used.

A pre-trip status via a visual inspection should be completed when the engineer checks out the locomotive prior to the beginning of their assignment. The engineer already does a routine pre-trip inspection of the locomotive to ensure that safety devices, horns, bells and radio are in proper working order. Through the EEBA training that will be provided to the train and engine crew, personnel can cover what to look for during this pre-trip visual inspection. However, requiring the crew to document this inspection would be a difficult and unnecessary step. If an EEBA is missing, empty, or the tag is removed, the engineer would be required fill out an exception report and request that the Mechanical department replace the unit prior to the locomotive being placed in service.

Based on the administrative program the railroad plans to put into place to manage and track the EEBA's AIHA believes that a formal inspection of the units should be conducted at the same time as the locomotive quarterly inspection. The current plan for identifying and tracking each EEBA is to use a radio frequency identification (RFID) tag. This will allow for a unique identifier that will be assigned to each unit and identify the owning railroad. The RFID tag can be easily scanned during a quarterly inspection to document what units are currently mounted in each locomotive. The quarterly inspection would verify that the units are still in working order, that they have the required oxygen or air level, the case is intact, seals are in place, and the unit has not been tampered with. By having each unit in a computer database, personnel will be able to track each unit and identify when units are due for factory testing. By integrating EEBA inspection with the locomotive, personnel will ensure a seamless inspection process with one that is already well established within the railroad industry. This will ensure the most consistent and efficient process to ensure proper inspections of the EEBA's.

In addition to these regulations, there is a study addressing the minimum inspection frequency necessary for respirators stored for emergency escape purposes:

Bolton, N.E., and Whitaker, G.R. Inspection Frequency of Respirators Stored for Non-Routine Use. Oak Ridge National Laboratory. November 1974.

AIHA respectfully requests the FRA consider these comments as the FRA moves forward with this rulemaking.

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