

**National Association of Shooting Ranges**

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6/30/08
via fax*

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National Institute for Occupation Safety and Health
of the Centers for Disease Control and Prevention
Docket Office

VIA Fax: 513-533-8285

and Email: nioshdocket@cdc.gov

SUBJECT: Comments to NIOSH Docket Number 128

To Whom It May Concern:

Thank you for the opportunity to comment on the draft NIOSH Alert- "Preventing Occupational Exposures to Lead and Noise at Indoor Firing Ranges"—NIOSH docket number 128.

The National Association of Shooting Ranges (NASR), is dedicated to promoting and protecting shooting facilities by providing leadership through science-based information and partnerships.

According to the American Sports Data Superstudy, nearly 20,000,000 Americans participate in target shooting every year and target shooting is one of the fastest growing sports in the country. Shooting ranges are critically important to providing a safe venue of participation for these enthusiasts, and a place where all Americans can learn and practice the safe handling of firearms. The result of more people, shooting more often, is fewer accidents. The number of firearm-related accidents and accidental fatalities has been steadily declining for the last 25 years—down to 600 accidental fatalities in 2006. While we still have work to do, it is important to note that this is the lowest number of accidental fatalities since the National Safety Council began keeping records in 1903. Firing ranges have played a critical role in this success.

Our focus is on firearm safety. This includes all aspects of safety—including the health of range operators, employees, shooting sports enthusiasts and their families. We are proud of the partnership we formed with the Occupational Safety and Health Administration (OSHA). The focus of this alliance is to provide guidance on the proper management of airborne lead at indoor ranges. We have worked closely with OSHA, the National Institute for Occupational Safety and Health (NIOSH), and the Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) to create a guidance document

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entitled "Airborne Lead Management and OSHA Compliance for Indoor Shooting Ranges." We are actively educating range operators, regulators and industrial hygienists through seminars co-sponsored with OSHA.

We welcome another document that focuses on science-based management practices. In general, the draft NIOSH Alert provides good general information, but we do have a number of comments and technical corrections. Enclosed is an 8 page document that identifies the specific wording from the NIOSH draft, our proposed changes, and an explanation of why we recommend the change.

We welcome any opportunity to continue our dialogue as we work together to promote safety.

Please don't hesitate to call with any questions or comments.

Regards,

A handwritten signature in black ink, appearing to read "R. Richard Patterson", with a long horizontal flourish extending to the right.

R. Richard Patterson
Executive Director

enclosure

**Review and Comments on NIOSH Docket Number 128 "Preventing Occupational Exposures to Lead and Noise at Indoor Firing Ranges"
Submitted by the National Association of Shooting Ranges (NASR)
11 Mile Hill Road, Newtown, CT 067470**

Page numbers do not exist on the first six pages (including the cover page). For simplicity, we will refer to these using lower-case roman numerals with the cover being "page i."

Page iii.

"2. Protect yourself." Second bullet point.

Delete "lead clean-up" replace with "range maintenance."

Reason: Any range maintenance could potentially increase lead exposure, not just cleaning.

Page v.

"2. Provide (delete "workers and shooters," replace with "employees") with personal protective equipment and other protective equipment.

Reason: The NIOSH Alert addresses *Occupational* exposures. Recreational shooters are beyond the scope of this Alert. Furthermore, it is unreasonable to expect commercial ranges to provide eye and ear protection to all their customers. We do suggest they require use of eye and ear protection on the range and offer this protective equipment for sale or rent.

Second bullet point.

Delete "and NIOSH approved respirators."

Reason: There is no evidence that cleaning supplies pose a risk. This puts the range operator in a position of having to create a time-consuming and costly respirator program where it may not be needed.

Third bullet point.

Delete.

Reason: While this may be a good idea under some circumstances—particularly if the range hasn't been cleaned in awhile and dust has had a chance to accumulate—it is not a one-size-fits-all solution and should not be given such a blanket recommendation.

Fourth bullet point.

Delete.

Reason: Establishes a practice that is both a) beyond the scope of regulations (unless the facility exceeds the PEL), and b) that most ranges do not have the physical capability of providing.

Page 1.

Paragraphs 1 and 4.

Delete "17 million" and replace with "20 million"

Reason: The sport is seeing significant growth and more people are participating.

Page 2

Paragraph 1.

Delete "Most are small operations and are often family run. Many are operated without the benefit of sufficient environmental and occupational health controls in place to effectively protect the health of shooters and firing range personnel from the adverse exposure to lead, noise and other contaminants."

Reason: There is no justification for such a broad and sweeping generalization.

Paragraph 1.

"The hazards from exposure to lead (both airborne and skin), noise, and other..." Delete "skin" and replace with "ingested."

Reason: dermal absorption is not a risk at firing ranges. Accidental and incidental ingestion may be a risk. This change further clarifies the potential risks and gives a clearer focus on the issues of concern.

Page 3.

Last paragraph

"In addition to inhalation exposures...discharge can be (insert "ingested after being") transferred to people's skin, especially the hands..."

Reason: Again, this is a clarification of the risk of ingestion.

Page 4

Paragraph 1.

"...presence of lead contamination and lead (delete "in gunshot," replace with "from") residues (delete "from," insert "emitted during") firearms usage."

Reason: Clearer wording.

Paragraph 5.

Delete the two sentences "The U.S. Department of Housing and Urban Development...for window troughs and exterior concrete or other rough surfaces [HUD 1995]."

Reason: These are for residential exposure to organo-lead compounds in residences. Firing ranges are primarily a metallic (elemental) form of lead in a completely different exposure pathway model. While it's probably great information for old houses, it does not apply to commercial and industrial scenarios such as firing ranges.

Page 5.

Paragraph 4.

Delete the entire paragraph entitled "Department of Housing and Human Services"

Reason: This is irrelevant and conflicts with existing regulations. Certainly there are organizations that propose lower thresholds for lead (and other chemicals). There are also organizations that suggest some thresholds are already too low. This should be part of a science-based national dialogue that includes academia, stakeholders and government agencies, not part of a NIOSH Alert presented to the public on how to prevent lead exposures on firing ranges.

Page 6.

Paragraph 2.

Delete the entire paragraph "Association of Occupational and Environmental Clinics."

Reason: Again, this is conflicting with existing regulations and therefore irrelevant.

Paragraph 4. Last sentence.

"Airborne lead concentrations were reduced substantially...by using (delete "alternative") ammunition (delete "such as," and replace with "that had") nylon-coated and copper-jacketed bullets."

Reason: Lead ammunition with some sort of protective jacket has been used for centuries (cloth and paper gave way to copper as velocities increased) and is not considered "alternative ammunition."

Page 8.

Paragraph 1. Last sentence.

Delete "ammunition substitution"

Reason: Using lead-free ammunition in addition to the other lead management practices is redundant and overly burdensome to the firing range.

Paragraph 3.

"Results of carpet dust sampling collected...higher lead concentrations found in students' rooms... The presence of lead in carpet samples suggests that....from the firing range."
Suggest deletion of this section of the case studies.

Reason: There are many sources of lead and unless there was a complete evaluation, suggesting it came from the range could be a false assumption. Just as an example, how old was the facility? Did it contain lead-based paint? Did the property and training grounds have a former use that included deposition of lead compounds? etc. Unless this was thoroughly evaluated, the conclusion that it must have come from the range is invalid.

Page 9.

Paragraph 2.

Delete "ammunition substitution."

Reason: See comment for Page 8, Paragraph 1 about the redundancy of using lead free ammunition AND adopting lead management practices.

Page 10.

Paragraph 1.

Just a question/comment on placement of the microphone. Where was the microphone located when the testing was done? The sound energy wave from firing activities is directional. The measurements are only valid if taken at the ear of firing range employees.

Paragraph 3.

"...increased risk for inhalation and (delete "skin," and replace with "ingestion") lead exposure hazards..." also later in the paragraph "...identifying (delete "skin," replace with "ingestions") exposures.

Reason: Clarifies the potential exposure risks. See earlier comments.

Paragraph 4.

These points need to be highlighted, put in bold letters, and should really be emphasized in the introduction. This is the heart of what should be done to prevent lead exposures at indoor firing ranges.

Paragraph 5.

"...by using proper sound measuring instruments (insert "and microphone location") and the importance of..."

Reason: See comments for Page 10, Paragraph 1.

Page 11.

Paragraph 6.

Add the following sentence: "Further, mixing spent lead bullets with metals from non-lead alternatives may render the material unfit for recycling and therefore require costly and otherwise unnecessary disposal of the spent ammunition as a hazardous waste."

Page 12.

Paragraph 1.

"...while some jacketed bullets present no airborne lead hazard (delete "the US EPA still considers lead from expended bullets to be toxic," replace with "at the firing line, impact with the bullet trap may generate lead dust at the trap. This lead dust may present a source of lead exposure") to people conducting range maintenance..." Also, delete the "[EPA 2005]" reference at the end of the sentence.

Reason: Clarifies the message, and eliminates a mis-quote of the 2005 EPA document.

First bullet point.

The first sentence is exactly reversed. It should read: "Use jacketed lead bullets (as opposed to dip-coated copper plating) to minimize..."

Reason: Jackets are the thicker material.

Page 13.

Paragraph 1.

Delete "...where the projectile has a fluted copper jacket combined with a cast zinc alloy core."

Reason: Most frangible ammunition is a sintered material. It's likely that any bullet with a jacket would not qualify as "frangible" because the jacket would constitute a single mass of metal that would be less likely to fragment on impact.

First bullet point.

"...operators who depend on using (delete "ammunition," replace with "lead") substitutes..."

Reason: Clarifying the message. It's not substituting the ammunition, it's substituting the material used to make the ammunition.

"...ensure that (add "firing ranges and") firearms previously used with lead ammunition are (add "appropriately") cleaned (delete "thoroughly," replace with "and evaluated") before being used with the new type of ammunition.

Reason: Mixing different metals may create recycling problems, so an appropriate cleaning prior to implementation is advisable. Also, the equipment must be evaluated to ensure safety and compatibility with the new type of ammunition.

Second bullet point.

Delete

Reason: Proper and thorough training requires live ammunition. We are asking men and women in uniform to step into harms way. We have a responsibility not to cut corners in their training for the sake of convenience.

Paragraph 6 (First bullet point under "Lead")

Delete "This is called parallel air flow."

Reason: Wordsmithing. The way it's worded, it sounds like reverse airflow back to the firing line is called 'parallel air flow,' which is not correct.

Paragraph 7 (Second bullet point under "Lead")

(delete "A minimum distance of 15 feet is needed from the wall to the firing line. Some experts consider diffusers to be least desirable since they produce jets of air that can produce" replace with "Diffusers that produce jets of air can create") turbulence at the firing line.

Reason: Different diffuser systems have different distance requirements. The distance is dependant on many variables and is specific to the building and the system. In general, the more directed the air (ie: "jets of air") are more likely to create turbulence unless there is an appropriate distance between the diffuser and the firing line.

Page 15

Paragraph 5 (second bullet point under "Filter System Maintenance Recommendations:")
"Loaded filters will (insert "likely") contain lead (delete "contain gun powder, making the waste toxic and potentially explosive. Dirty," replace with "in sufficient quantity to classify the used filter as a hazardous waste under the Resource Conservation and Recovery Act (RCRA). A Toxicity Characteristics Leaching Procedure (TCLP) test will determine whether the filter is a regulated hazardous waste under the RCRA regulation. If the filter does not meet the criteria of a hazardous waste, it can be disposed of as normal solid waste. However, if the filter does have sufficient lead to be considered a hazardous waste there are two options: first is to recycled or reuse the filter, in which case it is NOT considered a waste (RCRA recycling exemption 40 CFR 261.4(a)(13)) and there are no hazardous waste handling procedures required. If the filter is not recycled, and it fails the TCLP, then it must be disposed of properly and according to Federal, State and local regulations."

Reason: filters are not shown to contain gun powder, and even if they did, gun powder is NOT an explosive. Refer to the Sporting Arms and Ammunition Manufacturers' Institute, Inc. (SAAMI) DVD "Sporting Ammunition and the Firefighter" for more information. Also, the proposed new text accurately reports on the RCRA recycling exemption.

Page 16

Second bullet point (towards the end)

"Observation room windows should be (insert "located behind the firing line and") designed to (delete "withstand bullet impacts and to") maximize sound reduction. The glass should be laminated (delete "and certified as bullet impact resistant"). If double panes of glass (delete "can be," replace with "are") used, then the glass that is in the firing range should be (delete "bullet impact resistant and") of a different thickness than the interior pane to increase noise reduction."

Reason: The bullets go the other direction and a requirement for bullet proof glass behind the firing line is excessive.

Page 17.

First bullet point under "Preventing the potential for lead exposure..."

Delete "or adjacent areas."

Reason: redundant and unduly restrictive.

Second bullet point

Is there justification for a lead exposure from handling spent cases? If not, delete.

Third bullet point

Same question as second bullet point.

Page 18

Paragraph 2 (First bullet point)

(delete "Shooters and") workers should shower, whenever possible, and change clothes at firing range facilities after (delete "shooting or") performing maintenance or cleaning activities at the range."

Reason: Refer to previous comments about the scope of the issue and this Alert not including the shooting sports participant.

Paragraph 6

"...limiting the length of time (delete "shooters," replace with "employees are on") the firing range..."

Reason: Administrative controls are only relevant to employees.

Paragraph 8 (First bullet point under "Personal Protective Equipment")

"For (delete "shooters," replace with employees") requiring improved communication..."

Reason: Refer to previous comments on the scope.

Paragraph 2

"...protective outer clothing (which may be disposable). (Insert "If respirators are part of the lead management plan,") firing range operators must develop..."

Reason: There is no requirement for the use of respirators unless the air level exceeds the PEL.

Page 19

Last paragraph (First bullet point under "Exposure Monitoring")

"...linking results to worker records (insert "while complying with HPPA") should be clearly outlined."

Reason: HPPA creates strict rules that must be followed—and severe penalties for mishandling confidentiality of healthcare records.

Page 20

Second column (First bullet point under "Worker Health Monitoring")

"The OSAH general industry lead standard contains provisions for the medical monitoring of workers exposed to lead (29 CFR 1910.1025 (d)). NIOSH supports using these provisions for firing range workers (delete the rest of the bullet point unless it summarizes the OSHA general lead standard as it applies to firing ranges).

Reason: Again, this discussion may be worthwhile, but this is not the place. The guidance must be consistent with the current regulations.