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Lead Contamination in Indoor Firing/Gun Ranges

Posted by [atlanticei](#)

Concerned about lead contamination in indoor firing/gun ranges?

If you need lead testing at an indoor firing range/shooting range or other services related to lead at gun ranges as discussed in this article, call us at 973-366-4660 or email us at info@atlenv.com for details and a free estimate.

Written By: Robert E. Sheriff, MS, CIH, CSP, President

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Indoor Firing/Gun Ranges and Lead Exposure

It is estimated that there are 16,000 to 18,000 indoor shooting ranges in the United States. Each of these indoor gun ranges presents the possibility of lead exposure not just to the firearms users but many others who may utilize the building where the range is located, or come in contact with shooters and range personnel who may carry lead on their shoes, clothing, and skin.

Lead Contamination

Lead contamination is very likely throughout the building especially when the firing/shooting range has been in operation for a long time, and provides other recreational services.

Police and Military Ranges

Police and military ranges are very often housed in a building where other services are located. This includes exercise rooms, weight rooms, showers, meeting rooms, and administration offices. This may even include kitchens, break rooms and cafeterias.

High Schools

There are also numerous high school and college shooting ranges for student competition teams and for ROTC.

Clubs and Organizations

Private shooting ranges such as sportsmen's clubs and fraternal organizations are likely to be in meeting halls that include kitchens and community event facilities some that are even rented out to anyone needing large event space.

We have found lead contamination in essentially all parts of such buildings especially when the firing range has been in use for a long time—15 to 20 years or more.

Ventilation

Also, such older ranges are not likely to have proper ventilation and air filtration to prevent the escape of airborne lead outside the building and to other parts of the building. What's more, the contamination may be outside as well where the exhaust vents are located—on roofs, on ground level resulting in exterior lead contamination of roofs, siding, ground, and groundwater.

Sanitation

Sanitation is another situation that can result in lead contamination away from the firing line itself. Clothing used by the shooters is kept in clothing lockers with street clothes and personal items. In many cases, shooters don't wash their hands before handling other items such as exercise equipment and even food.

Controls

Newer ranges often are designed and rules set to control lead contamination. This can include HEPA filtered exhaust, copper-jacketed bullets, shooter clothing lockers in the range area, washing facilities in the range area, frequent cleaning and vacuuming (using HEPA filtered vacuums) but still, the potential to carry lead contamination outside the shooting range exists—certainly less likely than at older ranges.

Clean-Up

Clean-up of lead contamination can be time-consuming and expensive especially when it affects the other parts of the building. Achieving complete decontamination is a costly process and often does not result in a completely lead-free building.

What is a Safe Level?

Defining what is a safe level of lead on surfaces is not easy. The greatest danger of lead exposure that can adversely affect humans is for children six years old and younger. At these ages, very small amounts of exposure can reduce a child's IQ and have other longer-term adverse effects throughout their lives. Lead contamination can be carried home on clothing and shoes and subject children and family members to lead—this contamination can also be in vehicles as well.

HUD Guidelines – Recent Revisions

HUD (Housing and Urban Development) has established guidelines for surface contamination from lead-based paint in housing where young children may reside. The acceptable levels of surface lead contamination established by HUD for residential housing with small children are:

10 ug/ft² – bare and carpeted floors

100 ug/ft² – interior windowsills

100 ug/ft² – window troughs

Osha Standards

OSHA has set standards for lead exposure which applies to the individuals in the American workforce. The standard is 29CFR1910.1025 but this only applies to employees such as range officers or other employees of the organization. Further, it only applies to employees in private organizations not public employees like police and military personnel.

However, there are many public organizations that have voluntarily accepted OSHA regulations. [The OSHA lead standard](#) sets limits on airborne lead and also a limit on blood lead levels which could result in the removal of the workers from lead exposure for elevated blood lead.

Army and Air Force National Guard Guidelines

The Army and Air Force National Guard developed a very useful guideline titled, “Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges.” It is a useful publication for decontamination of indoor shooting ranges even to the extent that space can be used for other uses after decontamination. Of course, it is useful for decontamination whether the indoor range continues or is intended for other uses.

They identify the acceptable surface contamination level of 200 micrograms per square foot (200 ug/ft²) or less which is a reasonably safe level as long as no young children would be using the future space. A good example is setting up a daycare facility in a former college firing range. In such cases where children 6 years old are intended to occupy should adhere to the HUD safe level of 10 ug/ft² as the appropriate level of decontamination—from experience, is difficult to achieve. Such use of a former shooting range is not advisable in such cases. It should be noted that the 200 ug/ft² is difficult to achieve—and may not even be possible for older shooting ranges, without complete replacement of the lead-contaminated surfaces.

Evaluating Lead Contamination in Indoor Firing/Shooting Ranges

The consulting and contracting team at [Atlantic Environmental](#) have experience in evaluating lead contamination in indoor firing/shooting ranges with the ability to

determine OSHA compliance, appropriate [ventilation](#), testing all areas for surface contamination, and clearance sampling after decontamination.

For help and to learn more about lead contamination in indoor firing/gun ranges, Contact us by e-mail (info@atlenv.com), call us at **973-366-4660** or fill out our [online form](#).

For lead contamination in indoor firing/gun ranges, our primary service areas are [NJ](#), [NY](#), [NYC](#), [PA](#), [CT](#), [DE](#), [\(Boston\)](#) [MA](#), [RI](#), [Wash DC](#), [WI](#), [MD](#), [MI](#), [\(Chicago\)](#) [IL](#), [VA](#), [IN](#), [\(Atlanta\)](#) [GA](#), [AL](#), [NC](#), [SC](#), [TN](#), [\(Dallas, Ft Worth\)](#) [TX](#), [OK](#), [DC](#), [AR](#). We can service most other areas of the U.S. but with some added travel charges.

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