

Getting the Lead Out in Alaska

How a sportsman's club's quick action protected shooters' health and their range

By Tony Mandile

“Get the lead out” became a popular adage during the 1930s as a way to tell someone to hurry up or get moving. More recently, for members of an indoor range in Delta Junction, Alaska, the saying took on a literal translation when potentially dangerous lead levels were discovered.

The small-bore range, operated by the 125-member Delta Sportsman's Association (DSA), serves as the venue for the high-school rifle team and the Delta Deadeyes — a shooting club for pre-high-school youngsters. DSA President and rifle-team Coach Mike Bender said the lead problem was discovered fortuitously when a routine test in the spring of 2007 showed elevated levels of lead in the blood of a one-year-old child whose father is a range volunteer.

Sleuthing for the cause

Although well below the danger standard set by the Occupational Safety and Health Administration (OSHA) for the work place, the infant's higher-than-normal lead level became a concern. Finding the cause, however, took some detective work.

“It just so happens that the child's dad was a volunteer worker at our range and often cleaned the floor after a shooting session,” Bender said. “After eliminating many possibilities, [health authorities] concluded the lead problem was related to the child's habit of chewing his dad's shoes.”

Subsequent blood tests for the father and a teenage son who shoots on the high-school team also

revealed above-average lead levels in their systems. That prompted further testing of all those involved in activities at the DSA range. Nearly everyone, including Bender's teenage son Ryan, showed elevated lead levels.

“Right then we knew we had a problem that needed immediate attention if we wanted to continue operating the range,” Bender said.

Lead poisoning has garnered plenty of media attention, making the public more aware of the possible health problems that include anemia, nervous system dysfunction, kidney problems, hypertension and infertility.

Although not as readily absorbed into tissue as the organo-lead compounds used in paint and gasoline, metallic lead bullets and primer compounds used at an improperly managed indoor range could raise the potential for lead to either be inhaled or ingested accidentally after handling firearms and other lead-covered items and then eating, smoking or drinking without first washing one's hands.

Guidance from NASR

To order any of the many helpful publications produced by the National Association of Shooting Ranges, including “Airborne Lead Management & OSHA Compliance for Indoor Shooting Ranges,” view the NASR catalog at www.rangeinfo.org. Publications are free or deeply discounted to NASR members, and the Web site also features an online membership application.

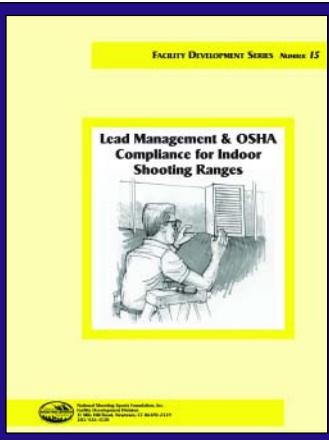


Photo by Tracy Dunham

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That lead could eventually work its way into a person's blood stream.

The National Association of Shooting Ranges (NASR) has been at the forefront of tackling the lead-management issue for a long time. In 1991, NASR, OSHA and the Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) established an alliance to promote safe and healthful working conditions for workers in target shooting facilities.

NASR Executive Director Rick Patterson recognizes that the lead danger presented by an indoor range is real but that it can be easily prevented with proper management techniques as outlined in the NASR booklet, “Airborne Lead Management & OSHA Compliance for Indoor Shooting Ranges.”

“We have worked with OSHA not only to develop proper management practices but also to educate range operators,” Patterson said. “We encourage all ranges to examine their practices and address the key issues of proper ventilation and maintenance methods to avoid elevated lead levels. Our publication outlines all this and is available to any range for the asking.” The DSA took quick

action, finding several items that likely contributed to the high lead levels.

“The first thing we did was install a retractable target system so shooters no longer had to walk downrange to change their targets,” Bender said.” We also stopped the kids from sweeping the floor, which was a major cause of the lead dust getting into the air. They probably inhaled plenty of it, too. Adults took over the sweeping duty, and our main goal was to eliminate [sweeping] altogether. So my wife wrote up a grant request to the Friends of the NRA. They gave us \$4,600, and we immediately looked at solving the floor-sweeping situation.”

Buying a scrubber

The club purchased a sophisticated Micromatic™ 14E Scrubber from a firm in Minneapolis, Minn. The \$2,200 walk-behind machine puts down a metal-cutting cleaning solution, scrubs the floor with a rotary brush and immediately sucks up the dirt-laden liquid.

“I first used one of the scrubbing machines at the University of Alaska’s range in Fairbanks,” Bender said. “So I already knew it would be a good solution for us. It picks up everything as it goes along, and by the time the operator puts his feet down behind the scrubber, the floor is almost dry,” Bender said.

An environmental assessment at the range in Oct. 2007 confirmed the scrubber was doing its job.

“When they checked the air quality, the parts per million of lead to air was well below the federal guidelines for a residential house. That’s significant, considering the circumstances and amount of lead used at an indoor shooting range compared to a home,” Bender said.

Another improvement targeted personal hygiene habits and the products used. Now, everyone who uses the range must wash their hands before leaving with UniqueTek’s D-Lead® Hand Soap. As the name implies, the special cleaning agent actually provides for the safe and complete removal of lead and other heavy metals during washing.

Bender’s club has several addition-

al improvements either in progress or planned for the future.

The Delta Junction City Council awarded a \$40,000 grant to DSA for upgrades to the rifle range’s ventilation system. So far, part of that grant has gone to installing two industrial exhaust fans downrange near the targets to help remove dust-laden air during shooting sessions.

“In addition to better insulation, we installed a heater that brings fresh air to the uprange side, and this summer we’re putting in an

industrial size heat-recovery ventilator so we don’t have to throw so much money out into Alaska’s cold,” Bender said.

The DSA members think their effort is well worth it. Although the high-school rifle team consists of only nine teens, three of them — Ryan Dunham-Bender, Amanda Fisher and Hun Tak—competed at the Junior Olympics in April.

As Bender put it, “That’s a pretty good representation from a town with a population of only 800.”