

**Randolph Community College
Lead Exposure Plan
Firearms Training**

June 27, 2011

PURPOSE

Randolph Community College conducts firearms training for local law enforcement agencies as part of the Basic Law Enforcement Training program and annual in-service firearms training. The airborne lead from the ammunition used during this training can be absorbed into a person's body by inhalation and ingestion. If lead is absorbed in certain doses, it can be toxic. The following policy has been established to reduce and control the exposure to lead of RCC instructors, staff, and students. This policy will be reviewed and updated annually.

This policy is based on OSHA Standards for Lead Exposure 29 CFR 1910.1025. Understanding of the following two terms is essential to comprehending this policy.

Action Level – Instructor/staff exposure, without regard to the use of respirators, to an airborne concentration of lead of thirty micrograms per cubic meter of air (30 ug/m³), averaged over an eight-hour period. (b)

Permissible Exposure Limit (PEL) – The highest level of lead in the air to which an instructor or staff member may be permissibly exposed over an eight-hour period. The Permissible Exposure Limit is fifty micrograms of lead per cubic meter of air 50 ug/m³, averaged over an eight-hour period. (c-1)

LEAD POISONING

Lead poisoning may pose a serious health hazard to individuals constantly exposed to this by-product of firearms training. Lead can come from the primer, powder, and projectile. Residue is found on the weapon and on shell casings as well as the dust on the range.

a) Symptoms of lead poisoning are:

- (1) Abdominal pain
- (2) Fatigue
- (3) Nausea
- (4) Headaches
- (5) Constipation
- (6) Subtle mood changes
- (7) Irritability
- (8) Depression

Increased lead levels in the body may also result in muscle pain and weakness, weight loss, anemia, impotence, convulsions, and renal failure.

b) Sources of lead

Once the primer ignites, the powder lead particles are expelled into the air. Lead styphnate is a compound often found in the primer. Particles also shear off the projectile as it travels down the barrel and are expelled. The heat of the burning powder may also cause toxic fumes if the base of the lead projectile is exposed. Particles may be found on shell casings as well as the projectile itself and on the ground. Dry sweeping of a range should be prohibited.

c) Reducing risk to lead exposure

- (1) Do not smoke or eat on the range
 - (2) Do not place shell casings in the cap or hat while policing the range
 - (3) Wear a mask when sweeping a hard surface or paved range; do not dry sweep a range
 - (4) Wash hands prior to eating
 - (5) Wear protective gloves when policing the range or cleaning the weapon. Remember that clothing, arms, face, hair, etc., may contain lead particles.
- d) Review of Occupational Safety and Health Administration (OSHA) regulations

FACILITIES

**RCC WILL NOT CONDUCT ANY FIREARMS TRAINING AT AN INDOOR FIRING RANGE.
FIREARMS TRAINING WILL BE CONDUCTED AT RCC EMERGENCY SERVICES TRAINING CENTER.**

1. An area will be designated for eating and drinking that is separate from the firing range and the area where ammunition is loaded or handled in any other manner.
2. Running water or other acceptable means will be available for instructors, staff, and students to thoroughly wash their hands before eating or drinking, and after picking up spent shell casings.
3. Signs with the following statements must be posted at the firing range: (m-2-i)

**WARNING
LEAD WORK AREA
NO SMOKING OR EATING**

If any changes are made to the firing range area that may result in new or additional exposure to lead, additional tests must be conducted to assure that the exposure to instructors, staff, and students remains below the action level (d-7).

Instructors and staff involved in firearms training will be notified in writing of the results of all air monitoring results within 5 days after the receipt of these results (d-8-i0).

TRAINING

All instructors and staff are required to participate in training that will include the following areas (1-1-ii):

1. Hazards of Lead Exposure
 - a. Ways in which lead enters the body
 - b. Effects of overexposure to lead
 - Short Term (acute)
 - Long Term (chronic)
 - c. Health protection goals
 - d. Reporting signs and symptoms of health problems

2. Monitoring Lead Exposure
 - a. Definition/explanation of "action level"
 - b. Definition/explanation of "permissible exposure limit"
 - c. Air Monitoring

3. RCC Policies and Procedures
 - a. Reducing/controlling exposure
 - b. Air monitoring

Information presented in (1) and (2-a, b) is taken from OSHA Standards for Lead Exposure (1910.1025, App. A)

Permanent records documenting this training will be maintained. This documentation will include:

1. Roster with date and time of class, names of participants, and signature of person conducting the training.
2. Outline of the information covered

In addition to participating in the above-mentioned training, all instructors and staff of RCC involved in firearms training will receive a copy of the OSHA Lead Standard (1910.1025) and Appendices A, B, C of this standard. Each individual will be required to sign a document noting that they have received a copy of this information. (1-1-l)

RECORD MAINTENANCE

The Director of the ESTC will maintain all original records **permanently**. Copies of these documents will be forwarded to the Director of Safety and Emergency Preparedness.

These records shall include:

1. All air monitoring test results
2. Rosters of training sessions
3. Outline of training sessions
4. All correspondence with instructors/staff related to lead exposure information and air monitoring test results.

RAG June 27, 2011