UNITED STATES ARMY MEDICAL RESEARCH AND MATERIEL COMMAND

## *Office of Surety, Safety and Environment (SSE)*

# The SSE Elucidator

*"Elucidator": to give clarity through explanation and analysis.*

## February 2006 Newsletter


### *In This Issue…*



## Do You Know the Current Army Pollution Prevention (P2) Regulations?

As stated in Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*, the purpose of the Army's P2 program is to "reduce or eliminate the impact that any Army operation or activity may have on the total environment, including impacts to air, surface waters, ground waters, and soils, through reduction or elimination of wastes, more efficient use of raw materials or energy, and/or reduced emissions of toxic materials to the environment." There are several reasons why the Army stresses P2. Disposed hazardous waste, water discharges, and air emissions all have been associated with environmental contamination. The Defense Department has spent billions of dollars cleaning up environmental effects of the

past, and the cost of complying with current waste disposal regulations, wastewater treatment standards, and air pollutant emission limits continues to rise. Effective implementation of the Army's P2 program will limit these costs.

The Army's P2 program is primarily based on the following ARs and Executive Orders (EOs):

- AR 200-1, *Environmental Protection and Enhancement*
- AR 200-2, *Environmental Effects of Army Actions*
- EO 12844, *Federal Use of Alternative Fueled Vehicles*
- EO 13101, *Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*
- EO 13221, *Energy Efficient Standby Power Devices*
- EO 13123, *Greening the Government Through Efficient Energy Management*
- EO 13134, *Developing and Promoting Biobased Products and Bioenergy*
- EO 13148, *Greening the Government Through Leadership in Environmental Management*
- EO 13149, *Greening the Government Through Federal Fleet and Transportation Efficiency*

Some of the specific goals included in the Army's P2 program and stated in the regulations above are summarized in the table below.

**Summary of P2 Goals**

| Environmental Area | Goal | Source of Goal | Baseline Year | Target Year |
|---|---|---|---|---|
| Water Consumption | Continuous reduction in potable water use | EO 13148 | 2000 | 2006 |
| Toxic Release Inventory (TRI) Form R Releases | 40% reduction | EO 13148 | 2001 | 2006 |
| EPA Priority Chemicals | 50% reduction in use | EO 13148 | To be established | 2006 |
| Ozone Depleting Substances (ODSs) | Develop a plan to phase out the procurement of ODSs | EO 13148 | N/A | 2010 |
| Energy | 30% reduction in use | EO 13123 | 1996 | 2005 |
| Energy | 20% reduction in use for industrial and laboratory activities | EO 13123 | 1996 | 2005 |
| Vehicle Fuel Consumption | 3 mile per gallon fleet fuel efficiency increase | EO 13149 | 1999 | 2005 |
| Vehicle Fuel Consumption | 20% reduction in petroleum use | EO 13149 | 1999 | 2004 |

# Keeping Your Vision Intact

As February is the American Academy of Ophthalmology's Workplace Eye Safety Month, we want to remind you of important workplace eye injury statistics and eye safety measures. More than 2,000 people injure their eyes at work each day. Of these injuries, about one in ten require one or missed workdays to recover from and 10-20% will cause temporary or permanent vision loss. Experts believe that the right eye protection could have lessened the severity or even prevented 90% of these injuries.

Common causes of workplace eye injuries include:

- **Impact.** Flying particles or falling objects, such as metal and wood flakes, can hit the eye resulting in a puncture, scratch or bruise.
- **Dust.** Dusty job tasks, such as sanding woodwork or buffing a floor, can cause dust and grit to fly into the eye, resulting in irritation or scratches.
- **Chemicals.** Direct contact of chemicals in the eye can result in serious damage, such as a burn to the surface of the eye.
- **Heat.** Being exposed to high temperatures, molten metal or hot sparks pose a potential burn hazard to the eye.
- **Optical radiation.** Unprotected exposure to the intense light of a welding torch, laser or any other such device can result in retinal burns, cataracts, and permanent loss of vision.

The proper protective eyewear required for the hazards described above is summarized in the chart below. If you experience dust irritation or chemical exposure to the eye, immediately flush the affected eye with water.

| **Protective Eyewear Guidelines** | |
|---|---|
| **Potential Hazard** | **Protective Eyewear Required** |
| Impact injury | Safety glasses or goggles, Face shield |
| Dust irritation | Safety goggles |
| Chemical exposure | Safety goggles, Face shield |
| Heat damage | Safety glasses or goggles, Face shield |
| Optical radiation | Specially filtered goggles or helmet |

# Reducing the Risk Aerosols Pose to You

Aerosols in the workplace can cause a myriad of adverse health effects including headaches and dizziness, nosebleeds, chronic bronchitis and chest pain, dermatitis, eye and sinus irritation, and occupational asthma. Aerosols encountered in the workplace include dusts, fumes, and mists.

Dusts are discrete particles suspended in air. Examples of dusts that may be encountered in the workplace include sawdust, fiberglass, metals, and silica. Processes that emit dusts into the workplace include demolition of building components, metalworking, and wood working.

Fumes are airborne particles with diameters generally less than 1 micron. Examples of fumes that may be encountered in the workplace include copper, iron oxide, lead, and nickel. Processes that emit fumes into the workplace include tasks that involve high temperatures such as soldering and welding.

Mists are droplets of liquid suspended in air. The use of paints, lacquers, pesticides, and cleaning products all emit mists into the workplace.

The hazards posed by aerosols in the workplace can be reduced through a combination of controls including:

- **Substitution of a material with a less harmful one.** If a particular cleaning agent or solvent is causing dizziness or eye and sinus irritation, then ask your supervisor if it can be substituted for a less caustic product.
- **Adequate ventilation.** If you are involved in a process that creates large amounts of dust such as metalworking or woodworking, then your workplace should have a high air exchange rate or local exhaust ventilation installed. If you feel that the ventilation in your workplace is not adequate, consult your supervisor.
- **PPE.** If you are assigned PPE such as a respirator or safety glasses, then use them. Respirators should be inspected for any deficiencies prior to each use. Respirators should also be fit tested yearly or after significant weight gain or loss, facial surgery, or facial injury.
- **Wet methods.** In dusty processes such as building component demolition or insulation installation, a fine water mist can be used to reduce the amount of dust emitted into the air.

# Keeping Your Children Safe on the Road

February 12-18 is the National Highway Traffic Safety Administration's National Child Passenger Safety Week. Here are some grim child passenger statistics and ways to prevent your child from becoming a statistic. In the United States during 2003, 1,591 children ages 14 years and younger died as occupants in motor vehicle crashes, and approximately 220,000 were injured. Of the children ages 0 to 14 years who were killed in motor vehicle crashes, more than half were unrestrained. To properly restrain your child, follow the guidelines listed in the chart below.

| *Guidelines for Child Passenger Safety* | |
|---|---|
| ***Child Age/Weight*** | ***Proper Car Restraint*** |
| Under one year of age | Rear facing car seat |
| Above one year of age and between 20 and 40 pounds | Convertible car seat (can face the rear or front of the car)<br>Forward-facing car seat |
| Above 40 pounds and up to age 8 (or until adult seat belts fit correctly) | High back booster seats should be used if your car's seat back ends up lower than your child's ears.<br><br>Backless booster seats can be used if your car's seat back is higher than your child's ears. |
| Approximately 8 years of age (or when adult seat belts fit correctly) | Adult seat belts |

When using a car seat you should:

- Always follow the instructions.
- Put harness straps in the correct slots.
- Adjust the harness to be snug.

When using a booster seat make sure that:

- The shoulder belt is snug across the child's chest and collarbone, not across the neck and face.
- The lap belt is snug over the hips and upper thighs, not riding up on the abdomen.
- The child is sitting all the way back in the booster seat and is not slouching.

A child is ready to use the adult safety belt without use of a booster seat when:

- The shoulder belt remains snugly positioned across the chest and collarbone.
- The lap belt remains snugly positioned over the hips and upper thighs.
- The child can sit all the way back against the vehicle seat, with his or her knees bent over the edge.

For more information about child passenger safety, please visit the National Highway Traffic Safety Administration website at www.nhsta.dot.gov.

# Avoiding Sports Injuries

Did you know that:

- More than 30 million children play organized sports in the U.S.
- Nearly 1 million children are rushed to the emergency rooms for sports-related injuries each year.

Many of these injuries can be avoided by following these five simple tips:

1. **Wear protective gear**. This includes wearing helmets for such sports as baseball, football, and hockey; wearing mouth guards for sports such as basketball and football; and wearing kneepads while skateboarding or playing volleyball.
2. **Warm up**. A warm-up that lasts 15 to 30 minutes and includes a light jog and stretching will increase your blood flow and muscle temperature, making injuries less likely.
3. **Know the rules of the game**. Rules are in place for a reason. Knowing the rules of a sport and obeying them is a good way to keep yourself and other participants safe.
4. **Watch out for others**. Communicating with your teammates and opponents while out on the field is a good way to avoid harmful collisions.
5. **Let injuries fully heal**. Playing before an injury has been given time to fully heal can lead to an even worse injury. Remember, it is better to miss a game than the entire season.

# Announcements

**Title:** Personal Protective Equipment Compliance Training Seminar

**Dates:** Various Dates

**Location:** Various Locations

**Description:** The National Safety Council is offering a Personal Protective Equipment Training Seminar at its chapters throughout the nation. The four hour training seminar will help you assess your workplace for hazards and comply with the OSHA PPE standard.

**Phone:** 1-800-621-7619

**Web:** http://www.nsc.org/osh/oshtrain.htm

***The Elucidator***
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***For all accidents, no matter how minor, specific forms (military—DA Form 285-AB-4; civilians –DOL Claims Forms CA-1 or CA-2) must be submitted to your Safety Office. All employees requiring medical attention must visit your local Occupational Health Clinic as soon as possible post mishap.***