Air Force Research Lab's ENVIRONMENTAL, SAFETY AND OCCUPATIONAL HEALTH (ESOH) NEWSLETTER JULY 2000

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This newsletter is generated for Air Force Research Lab (AFRL) Wright-Patterson AFB, Ohio

Send any questions, topic ideas or suggestions for this newsletter to
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Smell those hotdogs roasting on the grill; yummy! You're all ready for your summer cookout. But before you dig in, let's first take a few moments to talk about safety during these long, hot days of summer fun.

Charcoal Grill Safety Tips

Charcoal produces carbon monoxide (CO) when it is burned. CO is a colorless, odorless gas that can accumulate to toxic levels in closed environments. Each year about 30 people die and 100 are injured as a result of CO fumes from charcoal grills and hibachis used inside.

To reduce these CO poisonings, the Consumer Product Safety Commission (CPSC) is offering the following safety tips:

- Never burn charcoal inside of homes, vehicles, tents, or campers. Charcoal should never be used indoors, even if ventilation is provided.
- Since charcoal produces CO fumes until the charcoal is completely extinguished, do not store the grill indoors with freshly used coals.

In April 1996, CPSC voted to revise the label on charcoal packaging to more explicitly warn consumers of the deadly CO gas that is released when charcoal is burned in a closed environment. The new label reads:

"WARNING...CARBON MONOXIDE HAZARD...Burning charcoal inside can kill you. It gives off carbon monoxide, which has no odor. NEVER burn charcoal inside homes, vehicles or tents."

The new label also conveys the written warning visually with drawings of grills inside a home, tent, and vehicle. The drawings are enclosed in a circle with an "X" through it. While the new label requirement will not become mandatory until the end of the year, many charcoal manufacturers have already started using the new labels on charcoal packaging.

Gas Grill Safety Tips

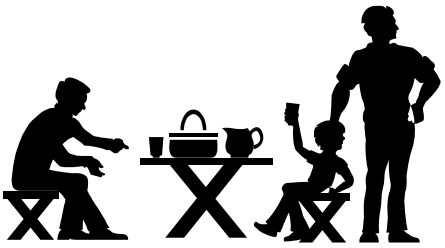
Liquid petroleum (LP) gas or propane, used in gas grills, is highly flammable. Each year about 30 people are injured as a result of gas grill fires and explosions. Many of these fires and explosions occur when consumers first use a grill that has been left idle for a period of time or just after refilling and reattaching the grill's gas container. To reduce the risk of fire or explosion, consumers should routinely perform the following safety checks:

- Check the tubes that lead into the burner for any blockage from insects, spiders, or food grease. Use a pipe cleaner or wire to clear blockage and push it through to the main part of the burner.
- Check grill hoses for cracking, brittleness, holes, and leaks. Make sure there are no sharp bends in the hose or tubing.
- Move gas hoses as far away as possible from hot surfaces and dripping hot grease. If you can't move the hoses, install a heat shield to protect them.
- Replace scratched or nicked connectors, which can eventually leak gas.
- Check for gas leaks, following the manufacturer's instructions, if you smell gas or when you reconnect the grill to the LP gas container. If you detect a leak, immediately turn off the gas and don't attempt to light the grill until the leak is fixed.
- Keep lighted cigarettes, matches, or open flames away from a leaking grill.
- Never use a grill indoors. Use the grill at least 10 feet away from your house or any building. Do not use the grill in a garage, breezeway, carport, porch, or under a surface that can catch fire.
- Do not attempt to repair the tank valve or the appliance yourself. See an LP gas dealer or a qualified appliance repair person.
- Always follow the manufacturer's instructions that accompany the grill.

Consumers should use caution when storing LP gas containers. Always keep containers upright. Never store a spare gas container under or near the grill or indoors. Never store or use flammable liquids, like gasoline, near the grill.

To avoid accidents while transporting LP gas containers, consumers should transport the container in a secure, upright position. Never keep a filled container in a hot car or car trunk. Heat will cause the gas pressure to increase, which may open the relief valve and allow gas to escape.

Consumers should use extreme caution and always follow manufacturer's instructions when connecting or disconnecting LP gas containers.



Grills manufactured after October 1, 1995, are required to have three additional safety features to eliminate leak hazards:

- a device to limit the flow of gas in the event of hose rupture;
- a mechanism to shut-off the grill; and
- a feature to prevent the flow of gas if the connection between the tank and the grill is not leak proof.

Consumers should consider purchasing grills that have these safety features.

The U.S. Consumer Product Safety Commission protects the public from the unreasonable risk of injury or death from 15,000 types of consumer products under the agency's jurisdiction. To report a dangerous product or a product-related injury and for information on CPSC's fax-on-demand service, call CPSC's hotline at (800) 638-2772 or CPSC's teletypewriter at (800) 638-8270. To order a press release through fax-on-demand, call (301) 504-0051 from the handset of your fax machine and enter the release number. Consumers can obtain this release and recall information at CPSC's web site at http://www.cpsc.gov. Consumers can report product hazards to info@cpsc.gov.

FIREWORKS

The American traditions of parades, cookouts, and fireworks help us celebrate the summer season especially our nation's birthday on the Fourth of July. However, fireworks can turn a joyful holiday into a painful memory when children and adults are injured while incorrectly using fireworks. Although most fireworks can be relatively safe with proper and careful usage, some fireworks, such as illegal fireworks, present substantial risks that can result in deaths, blindings, amputations, and severe burns.

A 7-year-old boy lost half of his left hand including the fingers when he ignited an M-80 he found hidden in a family bedroom. The M-80 exploded in the boy's hand.

An 8-year-old boy lost 3 fingers after igniting an M-80 on a kitchen stove. The victim was trying to exit his home when the device exploded in his hand.

An 8-year-old girl received second and third degree burns to her leg when a spark from a sparkler she was holding ignited her dress.

To help prevent accidents like these, the federal government, under the Federal Hazardous Substances Act, prohibits the sale of the most dangerous types of fireworks to consumers. These banned fireworks include large reloadable shells, cherry bombs, aerial bombs, M-80 salutes and larger firecrackers containing more than two grains of powder. Also banned are mail-order kits designed to build the fireworks?

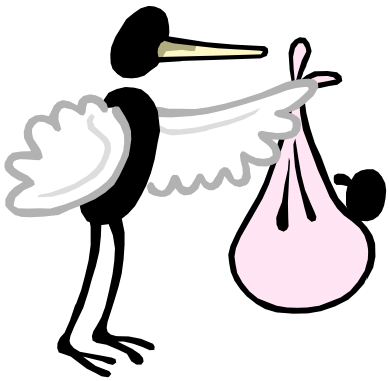
In a regulation that went into effect December 6, 1976, the U.S. Consumer Product Safety Commission lowered the permissible charge in firecrackers to no more than 50 milligrams of powder. In addition, the recently amended regulation provides performance specifications for fireworks other than firecrackers intended for consumer's use, including a requirement that fuses burn at lease 3 seconds, but no longer than 9 seconds. All fireworks must carry a warning label describing necessary safety precautions and instructions for safe use.

The Commission recently issued a new performance requirement to reduce the risk of potentially dangerous tip-over large multiple tube mine and shell devices. Tip-over of these devices has resulted in two fatalities. The new requirement went into effect on March 26, 1997.

The U.S. Consumer Product Safety Commission estimates that in 1996 about 7,600 people were treated in hospital emergency rooms for injuries associated with fireworks. Approximately 40 percent of the injuries were burns, and most of the injuries involved the hands, eyes and head. One-third of the victims were under 15 years of age.

Fireworks should be used only with extreme caution. Older children should be closely supervised, and younger children should not be allowed to play with fireworks.

Before using fireworks, make sure they are permitted in your state or local area. Many state and local governments prohibit or limit consumer fireworks, formerly known as class C fireworks, which are common fireworks and firecrackers sold for consumer use. Consumer fireworks include shells and mortars, multiple tube devices, Roman Candles, rockets, sparklers, firecrackers with no more than 50 milligrams of powder, and novelty items such as snakes and airplanes.



Pregnancy in the Workplace

Submitted by SSgt Linda Cadney

You have found out that you are pregnant! Congratulations! [Okay guys, not YOU, but maybe a co-worker…] What an exciting event – whether this is your first child or you are adding a new member to your family. Another decision you have made is to continue working.

There are a large number of women who have made the same decision, that is, to continue working throughout their pregnancy. Fetal protection has become an increasingly important issue to both the Air Force and to Public Health. Reproductive hazards can be found in many workplaces, especially in AFRL where so many chemicals are used. Reproductive hazards are often underestimated or overlooked. It is very important that as soon as you find out that you are pregnant to notify your supervisors immediately. The fetus (baby) is most vulnerable to hazards during the first trimester (first three months) of pregnancy.

Your supervisor must ensure that you report to either the Medical Center Obstetrical (OB) Department if you are Active Duty, or to the Occupational Medicine Clinic in Building 40 Area B, if you are a civilian. As a Department of Defense civilian, you are required to provide proof of pregnancy from your private physician when reporting. If you are a contractor, you should report your pregnancy to your supervisor and to the office contracting you.

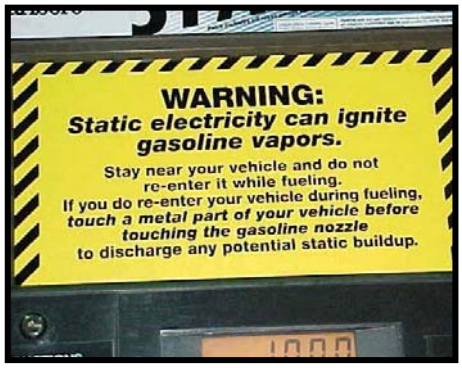
Afterwards, you will be sent to Public Health to have a workplace interview conducted as part of the Air Force Fetal Protection Program. The importance of this program is to evaluate the potential exposures of pregnant workers and to recommend duty restrictions as needed. Automatic workplace restrictions and/or removal is not the policy of the Air Force, job restrictions are usually required if there is exposure to hazards such as ionizing radiation or chemical/biological agents. Restrictions and/or removal is based on a workplace assessment accomplished by Bioenvironmental Engineering Services. Additional duty restrictions are added or changed by your health care provider as your pregnancy progress. This will ensure your recommended duty restrictions are always current.

If you have any questions please contact Public Health at 255-2515.

Be kind to yourself and your baby!!

Petroleum Equipment Institute Investigating Fires During Refueling of Vehicles

The Petroleum Equipment Institute (PEI) has identified an increase in fires occurring during vehicle refueling. The Army Safety Office was alerted by Safety folks from the Army Air Force Exchange Service (AAFES) regarding the reported incidence of several flash fires from apparent static electricity discharges while customer were fueling. They have also determined that there is an increased incidence nation-wide. PEI http://www.pei.org/ reported 36 such fires over the past few months - all of which were attributed to static discharge, half involved the motorist re-entering the vehicle during refueling. The cause of the remaining static electricity fires is not known. PEI is requesting such incidents be reported to them to assist their analysis. Included below is the text of a message that appeared on the PEI website.



From the Tulsa Letter 25 January 2000: The dispensing of gasoline into the fuel tank of a motor vehicle is a safe operation. Americans pump gasoline into their cars between 16 and 18 billion times a year generally without incident. The oil companies' track record in this regard is enviable. I am now in my twenty-second year at PEI. Up until September, the only refueling fires that were reported to me were caused either by an open flame (smoking), lack of electrical continuity between the nozzle and the grounded dispenser, or a spark from the engine compartment (motor running). However, within the last five months 36 ignitions of gasoline vapors during the refueling of motor vehicles at service stations have been verbally reported to us at PEI. All occurred during exceptionally dry weather. There were no open flames and the engines were turned off. Continuity was verified between the nozzle and dispenser. PEI members, oil companies and fire authorities that investigated the cause of these accidents concluded that in 100 percent of the cases **static electricity** was the source of ignition.

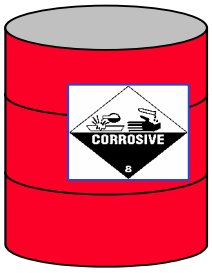
People familiar with these accidents were surprised when they first learned about them and have become increasingly concerned about the number of fires that have occurred over time. These fires raise questions about why they are occurring now and didn't occur in the past. They include:

Fuel chemistry: Has the chemical composition of gasoline changed in a way that the conductivity of the fuel has also changed?
Finish of the driveway or forecourt: Is the paved surface of the refueling area sufficiently dissipative?
Tires: Tires are being made with less carbon (conductive) and more silica (non-conductive). Does this make a difference?
Electrically insulated conductive components: Are all conductive parts, and in particular all metal parts in the area of the vehicle's tank system connected in an electrostatically dissipative manner so that the insulated conductors are not a source of ignition? We hear that this can be a problem even if the vehicle is grounded.
Plastic filler inlets: Today, some fuel tank filler necks are made of non-conductive plastics with a metal trapdoor opening. Some are connected to molded fiberglass fuel tanks. Could refueling transmit a charge to the insulated plastic filler neck that, in turn, might cause a spark to jump to the grounded nozzle?
Customers re-entering their vehicles during refueling: An electrostatic charge is generated through friction between clothing and the car seat to such an extent that electrostatic discharges to the vehicle body or to the filling nozzle are possible, especially if the motorist is wearing rubber-soled shoes. A Midwestern oil company warned of this hazard in a November 24, 1999, memo to its dealers, sellers and jobbers stating that "...a flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, customers should be discouraged from re-entering their vehicles while fueling is underway."

About half of the fires that have been reported to PEI involved the motorist re-entering the vehicle at some point during the refueling process. If you are aware of refueling fires presumably caused by static electricity, contact Bob Renkes at PEI. Include as much detail as possible to help them understand what happened: the make, model and year of the vehicle; type of fuel used; type of tires and driveway finish; customer action while refueling; and any other information that you believe would be useful.

UPCOMING ESOH TRAINING and OPPORTUNITIES:

RCRA HAZMAT/HAZWASTE TRAINING:



Initial Training: 20 Jul, 21 Sep, and 16 Nov 00

Annual Refresher Training: 15 Aug, 18 Oct, and 13 Dec 00

(Schedule both with Mary Shelly, 59000)

OPERATIONAL RISK MANAGEMENT (ORM) TRAINING

Level II training is required for supervisors and managers per WPAFBI 91-202. Supervisors are to subsequently provide their employees with "Level III" ORM Awareness training. An ORM video is available for loan from the safety office to assist supervisors with the Level III training.

To schedule ORM Training, contact Chuck Swankhaus at 43390

ESOH AWARENESS TRAINING:

11 July, 10 Oct 00 – schedule with Public Health at 52515

This course is highly recommended for all employees and contractors. We also go "on the road" and will present this course at your organization.

NEW ESOH TRAINING VIDEOS AVAILABLE:

These videos are on a wide variety of ESOH topics and are a great resource for supplementing training such as monthly supervisor safety training.

Contact Mary Shelly for an electronic list of video titles to choose from.

AIR FORCE FORM 813S - REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Don't forget to submit your AF Form 813s to Mary Shelly at AFRL/MLOF. For more information on AF Form 813s, see Environmental Management's Home Page:

http://www.abwem.wpafb.af.mil/em/emp/impact_analysis/impact.htm

Contact Mary Shelly to get electronic instructions for completing the AF Form 813 for both on-base and off-base work.

For more information on ESOH topics, visit the following Home Pages:

ASC/SEG Safety Office: http://www.asc.wpafb.af.mil/asc/safety/index.html

88 ABW Environmental Management: http://www.abwem.wpafb.af.mil/em/default.cfm

Bioenvironmental Management: http://www.bio.wpafb.af.mil/