SafetyResources

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July - September 2010

A Message from the President

Kristin VanSoest

Safety Resources, Inc. is celebrating 15 years of business. As part of our celebration we have made the decision to "adopt" a year long non-profit partner to support and promote. This year, Safety Resources, Inc., has chosen Girls, Inc. of Greater Indianapolis.

Girls, Inc. (formerly Girls Clubs) is an organization which helps and encourages girls in1st grade through 12th grade to build strong, healthy relationships, to be smart about college and career planning, and to make bold, empowered life choices.

We're impressed with their outreach model which utilizes partnerships with schools, youth organizations, community centers and other community partners to deliver programs in the neighborhoods where girls live. This makes the most out of every dollar. We support boy's organizations as well, but this year, since Safety Resources will become a Woman Business Enterprise, we thought we'd start with "girls first".

Our success as a company has followed similar principles, client care, tightly managed costs to keep prices low, and our unique ability to bring occupational safety ideas out of the text books and into real life, real work situations. We feel it is the right corporate citizenship to share our success with others. We hope you do too.

Inside this issue:

News and Events

New Employees Announcement

SRI would like to welcome two new employees to the team. Bob Blair joined us in May and is a graduate of Indiana University. Ryan Clayton joined us in June and is a graduate of Indiana University. We are excited to have their added safety expertise.

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Dermatitis: One of the most common occupational diseases

By: Ryan Goings

Dermatitis is a localized inflammation of the skin. In general, inflammation refers to a condition in the body when it is trying to react to a localized injury of tissues. Signs of inflammation include some or all of the following: redness, heat, swelling, and pain. Occupational irritant contact dermatitis is an inflammation caused by substances found in the workplace that come in direct contact with the skin. Signs of irritant contact dermatitis include redness of the skin, blisters, scales or crusts. These symptoms do not necessarily occur at the same time or in all cases. This kind of dermatitis is caused by chemicals that are irritating (e.g., acids, bases, fat-dissolving solvents) to the skin and is localized to the area of contact.

Factors contributing to irritation include

- the chemical properties of the substance (for example, is it an acid, an alkali, or a salt),
- the amount and concentration of chemical coming in contact with the skin, and the length and frequency of the exposure.

Contact dermatitis may be treated with compresses, creams, ointments and skin cleansers. In general, people should protect their skin from physical trauma, chemical irritation, excessive sunlight, wind, and rapid temperature changes while the dermatitis is active.

How does one protect him or herself from irritant contact dermatitis? There are several guidelines to follow which will reduce the likelihood of this illness:

- personal hygiene
- substitution of a less harmful substance
- enclosure of the process
- automation of the work procedures
- local exhaust ventilation systems
- good housekeeping
- education
- protective clothing
- barrier creams, skin cleansers
- convenient washing facilities

Establishing a good program to avoid exposure of the skin to irritant substances is vitally important for eliminating irritant contact dermatitis.

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Flagging Traffic

By: Matt McCreery

Do you feel that the motoring public is out to get you? That if you don't hop out of the way quickly enough, they will run you down? It is probably because many drivers take the attitude that we should see them and keep out of their path. That's just one of the hazards of flagging traffic. When f lagging traffic, we want to do everything we can to prevent an accident. Because when an accident occurs, everyone suffers: the motorist, our Company, and us. An accident can mean damaged vehicles and equipment, personal injury, and fatalities.

> "A flag person is used where conditions are constantly changing and traffic instructions must change, too."

SIGNS CAN'T THINK

Signs normally do a good job of giving messages or direction. But they have one disadvantage. They can't think. And if a situation changes suddenly, our signs can't automatically adjust. That is where we come in. A flag person is used where conditions are constantly changing and traffic instructions must change, too. For traffic control to be effective, the job has to be set up properly. We need to make sure that the necessary plans, procedures, and training are in place before the job begins. There are many considerations to be made when setting up a flagger site and they all need to be weighed so that safety is paramount. A simple example is placing signs in advance to warn motorists they are entering a construction area, and to let them know that a flag person will be giving directions. There also needs to be plans in place for emergency vehicle traffic, road conditions, set-up, etc.

MAKE SURE THEY SEE YOU

Motorists will be looking for the promised flag person, and should be able to spot you quickly. That is one reason you wear a fluorescent vest. So you will stand out. But let's not defeat its purpose. You shouldn't let a bunch of other employees gather around you, so that you can't be seen at all. Or what do you suppose motorists think when they come upon a whole group of us waving our arms, all of us directing various pieces of construction equipment and no one directing the driver? Sometimes motorists find two persons giving them conflicting directions. We can avoid such situations by following these few basic rules:

1. As a flag person, you should understand what our operation involves, so that you know what to anticipate when directing traffic.
2. You should be properly dressed and neat in appearance. Foot wear is important. Remember that pavement can get mighty hot or cold, depending on the weather. Sturdy shoes or boots are advisable.
3. Depending on state requirements, paddles or flags of the correct size must be used. Flags should be at least 24" square.
4. There is only one right way to signal traffic, while there are many wrong ways. We all should be using one standardized set of signals.
5. Only designated flag persons should be directing traffic, except in emergency situations. These individuals must be alert to traffic conditions and the construction operations at all times.
6. Never turn your back on traffic. Many a flag person has been knocked for a loop.
7. Flag persons should be firm but courteous with the public at all times. The general public could well form an opinion of the construction industry as a whole by the impression they receive from you.

THEIR HIGHWAY

Always remember that it's the public's high-way, not the Company's. So, we do want to be courteous. But at the same time, we want to make sure that an accident doesn't happen. We may have to be especially firm with some motorists to keep them from hurting themselves or others. Being a flag person is a very important job, because you have the responsibility of protecting the public, your fellow workers, and yourself.

Beat the Heat

By: Ryan Clayton

Throughout the summer months we should be expecting some extremely hot days, however we must take in consideration that our health is as important as getting the job done. Understanding common heat incidents will not only allow the work to be done but more importantly keep you safe out of the hospital.

What Happens To the Body?

Working in extreme heat conditions can wear on one's body. The human body, being warm blooded, maintains a quite constant internal temperature, even though it is being exposed to varying environmental temperatures. To keep internal body temperatures within safe limits, the body must get rid of its excess heat, primarily through varying the rate and amount of blood circulation through the skin and the release of sweat onto the skin. These automatic responses usually occur when the temperature of the blood exceeds your normal temperature of 98.6°F. In this process of lowering body temperature, the heart begins to pump more blood, and blood vessels expand to accommodate the increased flow. The blood circulates closer to the surface of the skin, and the excess heat is lost to the cooler environment.

"Under conditions of high humidity, the evaporation of sweat from the skin is decreased and the body's efforts to maintain an acceptable body temperature may be significantly impaired."

As environmental temperatures approach normal skin temperature, cooling of the body becomes more difficult. If air temperature is as warm as or warmer than the skin, blood brought to the body surface cannot lose its heat. Under these conditions, the heart continues to pump blood to the body surface, the sweat glands pour liquids containing electrolytes onto the surface of the skin and the evaporation of the sweat becomes the principal effective means of maintaining a constant body temperature. Sweating does not cool the body unless the moisture is removed from the skin by evaporation. Under conditions of high humidity, the evaporation of sweat from the skin is decreased and the body's efforts to maintain an acceptable body temperature may be significantly impaired. These conditions adversely affect an individual's ability to work in the hot environment. With so much blood going to the external surface of the body, relatively less goes to the active muscles, the brain, and other internal organs; strength declines; and fatigue occurs sooner than it would otherwise. Alertness and mental capacity also may be affected. Workers who must perform delicate or detailed work may find their accuracy suffering, and others may find their comprehension and retention of information lowered.

1. Heat Exhaustion-Symptoms: Heavy sweating, headache, light-headed, nausea/ vomiting, tingling sensations. Temp 99-104 F
2. Heat Stroke- Symptoms: Elevated temperature plus central nervous system disturbance, absence of sweating, can begin as heat exhaustion. Temperature 101-102 F.
3. Heat Cramps- painful spasms of the muscles that occur among those who sweat profusely in heat, drink large quantities of water, but do not adequately replace the body's salt loss.
4. Fainting - A worker who is not accustomed to hot environments and who stands erect and immobile in the heat may faint.

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Demolition Planning

By: Chris Hall

Bringing down a building or any other structure is an inherently dangerous work activity. Not only must the demolition contractor follow OSHA safety standards, but they must also conform to state and local regulations. Without an appropriate level of planning and protection it is likely that personal injuries, premature collapse, or damage to other structures will plague the process. The following are several considerations and requirements established by OSHA and ANSI (A10.6-1983 – *Safety Requirements for Demolition Operations*) to ensure operations take place in the safest manner possible.

The first step required is to have an engineering survey performed by a competent person to determine the stability and construction of the structure. The purpose of this is to prevent any premature collapse of part of the structure, or adjacent structure during the activities. Consideration should be given to public access to adjacent areas, fire potential, possible cave-ins, and other site specific hazards. If the building has been damaged by fire or natural disaster, it may be necessary to brace or shore walls and floors. The chemical or environmental hazards of the structure must also be determined; Asbestos, lead paint, stored or used chemicals may contaminate the jobsite. Employee safety, public safety, and environmental protection must be top priorities.

Once the engineering survey is completed, location of utility services is necessary to prevent accidental strikes. Electric, gas, water, steam, sewer, fiber optic, or other services must be identified and shut down from the exterior of the structure. The utility companies must be contacted and notified far enough in advance to give enough time to disconnect their respective services. It is important to obtain documentation of utility disconnects and verify, if possible, that services are no longer live. If any service is needed to complete the demolition, it must be moved temporarily.

> "Without an appropriate level of planning and protection it is likely that personal injuries, premature collapse, or damage to other structures will plague the process."

In the event of an injury, arrangements must be made for prompt medical treatment and transportation. Numbers to the nearest hospital, emergency services, and physicians must be posted on the jobsite. If no medical services are available within a reasonable time frame (between 3-5 minutes), there must be at least one person onsite certified in first aid onsite at all times. This also includes the accessibility of a fully stocked first aid kit. The numbers for local police and fire departments must be posted (if 911 service is not available), in the event of a fire or other activity where services may be needed.

A fire prevention plan must be established prior to work. This includes information for key personnel, reporting procedures, and evacuation plan. It must include protection provisions for heating devices, smoking policies and locations, clear access paths for emergency equipment, free access to fire protection equipment such as fire extinguishers or hydrants, and an alarm or notification system (air horns, siren, two-way radios, etc.).

Other considerations would have to be made if the structure is a high rise, stack, cooling tower, pre-stressed concrete, monolithic, or of any other type of design. In most cases, a registered professional engineer, qualified in that form of construction, must be consulted for advice for an appropriate method of demolition. In many cases of catastrophic accidents in demolition work, these structures are not evaluated properly and injuries result from premature collapse or debris falling or flying beyond the demolition area.

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Protect Yourself from Lightning

By: Bob Blair

Each year in the United States an average of 58 people are killed by lightning and hundreds more are seriously injured. People struck by lightning may suffer from such symptoms as: memory loss, attention deficits, sleep disorders, chronic pain, numbness, dizziness, stiffness in joints, irritability, fatigue, weakness, muscle spasms, depression, and more.

While we cannot control when and where lighting may strike, we can take measures to protect ourselves from being struck. The National Lightning Safety Institute sets forth some guidelines for lightning protection which we will briefly overview.

The first step, as in most things we do, is to make a plan. The plan should include evacuation procedures and safety measures, and should be communicated to all employees. This should be part of your Emergency Action Plan. Remember, for companies of less than 10 people this may be communicated orally; if there are more than 10 employees then the plan must be in writing and readily accessible by all employees.

"While we cannot control when and where lighting may strike, we can take measures to protect ourselves from being struck."

So what should this plan include? First of all we need to look at whether the employees are outdoors or inside when the lightning strikes.

1. Outdoors: Avoid water, high ground, and open spaces. Avoid metal objects and all sources of electricity (power tools, power lines, etc.). Do not seek shelter under canopies or trees; if possible try to find a substantial building or vehicle with all windows shut. If lighting strikes while you are outside, crouch down with your feet together and stay at least 15 feet away from other people.
2. Indoors: Avoid water, stay away from windows and doors, do not use the telephone, and take off head sets. Turn off, unplug and stay away from all appliances, computers, power tools and televisions.

It is also recommended that you suspend all activities for 30 minutes after the last observed lightning or thunder as the storm system may not have completely passed in this time frame.

If an employee is injured by lightning it is safe to transport him or her as the body will not hold the electrical charge after initial contact. Have a qualified individual perform any necessary first aid on the victim and call 911 immediately. The sooner the victim receives medical attention the lower the risk of that person sustaining debilitating or fatal injuries. Finally, know what all of the applicable emergency phone numbers are and communicate these to employees in your Emergency Action Plan.

Remember that lightning is a real work hazard just like any other hazard and should be treated as such. Protect yourself and your employees from lightning by following the guidelines set forth here.

Beat the Heat

By: Ryan Clayton

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What Can You Do?

1. Prepare for the heat. On the first day of work in a hot environment, the body temperature, pulse rate, and general discomfort will be higher. With each succeeding daily exposure, all of these responses will gradually decrease, while the sweat rate will increase. When the body becomes acclimated to the heat, the worker will find it possible to perform work with less strain and distress.
2. Drink Water. Hydration is key. A normal worker in the course of the day can produce 2-3 gallons of sweat. Replenish this loss of water and do not allow "thirst" to be your signal to drink.
3. Rest Areas. Provide cool rest areas to decrease the stress of your workers. This rest area should be as close to the work area as possible.
4. Rest area. Rather than be exposed to heat for extended periods of time during the course of a job, workers should, wherever possible, be permitted to distribute the workload evenly over the day and incorporate work-rest cycles. Work-rest cycles give the body an opportunity to get rid of excess heat, slow down the production of internal body heat, and provide greater blood flow to the skin.

Above are the most common safety issues that are experienced on job sites that deal with extreme heat. By understanding the signs and symptoms of each and understanding how to treat, you will have the ability to save a life or prevent an incident from occurring.

Demolition Planning

By: Chris Hall

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If blasting is to be used as a form of demolition, a written survey must be performed to establish the effects of blasting on adjacent structures, underground utilities, and any areas surrounding the structure site. Blasting is a highly dangerous activity with many regulations enforced by OSHA, state, and local governments. A qualified blaster is required to be in charge of any activities involving explosives, including transportation, storage, handling, and use. A blaster must be able to provide evidence of qualifications and be included in all stages of planning the operation which involves the use of explosives.

Demolition activity is not as simple as just tearing down a structure. It must involve a high level of planning and engineering surveys. Whether it is a partial demolition or complete structure these pre-work assessments must be made in order to prevent unnecessary accidents and injuries.