MSSC

Montana Safety Services Council

"Let us strengthen your safety culture"

August 2013 www.mssc.org VOLUME XX NO. 8

Table of Contents:

MSSC Staff

Greg Roadifer
Executive Director
greg@aehr.org

Paul Hutter
Vice President,
Western Region
paul@aehr.org

Aaron Stulc,
MSSC Director
aaron@mssc.org

Safety Leadership:
Engaging Employees in Process Safety

Implementing an effective process safety system goes beyond documented policies and procedures. It requires behavioral reliability in its execution. In this article, I will explore what organizations need from employees to prevent catastrophic events.

Process vs. personal safety – Employees need to understand the differences between personal safety and process safety. If this distinction is not understood, workers may mistakenly believe that good performance in personal safety is the same as effective control of the potential for catastrophic events. While personal safety exposures typically are very apparent in the workplace, mounting process safety issues can be developing silently in the background. Employees play a role in raising process concerns just as they would alert management to obstacles in the workplace that impact their personal safety.

Maintain a sense of vulnerability – Employees learn to accept as normal the risk they live with every day. Unfortunately, their comfort level can serve to lower the rigor and urgency with which policies and procedures are implemented and maintenance items are addressed. This does not, however, change the risks associated with the chemical they are handling. Developing and maintaining a healthy sense of respect for workplace exposures is critical to creating a culture in which employees understand the importance of consistently following process management disciplines.

It's OK to "cry wolf" – Too often, employees feel that if they raise a concern that turns out to be nothing, they will be punished or ridiculed. The path of least resistance is to assume that it is someone else's job to raise an issue, or that the observed deviation from normal is not a big deal. In a strong process safety culture, the little boy who cried wolf would get the key to the city, assuming he brought facts and data to the table. Employees need to be knowledgeable enough to recognize when and how to intervene, and be willing to do so. The challenge for leaders is to create a culture in which employees not only recognize when things start to go off track, but are willing and able to intervene to prevent a small problem from becoming a major event.

A note to leadership

A client recently had two small chemical releases in separate plants. At the next senior leadership team meeting, while the safety manager reviewed the incidents, the president wondered aloud why he had not been made aware of them at the time. The safety manager responded that the president must be doing something that makes people think these types of events are unimportant to him.

(continued on page 2)

Engaging Employees in Process Safety *(continued from cover)*

Leaders have both systemic and symbolic roles with respect to engaging employees in process safety. The systemic role is to ensure the "consequence systems" in the organization recognize and support employees who raise process safety issues, no matter how seemingly small. The symbolic role is to promote the contributions that employees make to improving process safety, thereby demonstrating that management values their input.

In a culture of commitment, employees have a personal value for safety that drives their performance. Safety isn't just about following the rules or "checking the box"; it's about going the extra mile because it's the right thing to do.

Leadership actions have the greatest impact on creating a culture where employees feel accountability and ownership for the organization. To the extent that the culture helps employees feel safe and comfortable raising issues, employees will be more willing to give the discretionary effort required to support all aspects of safety.

Source: nsc.org - Greg Robinson

Regulatory agenda: Silica, I2P2 rules expected soon

Washington – OSHA expects to issue highly anticipated proposed rules for its Silica and Injury and Illness Prevention Program standards within the next few months, according to the Spring Regulatory Agenda, published July 3.

OSHA administrator David Michaels has long said a standard requiring employers to create and establish an injury and illness prevention program is his top priority, and stakeholders have speculated for years on the rule's specifics. A proposed rule on I2P2 is expected in January 2014, the agenda states.

Proponents of the rule updating OSHA's Silica Standard have been upset that the proposal has remained under White House review for more than two years in a process that typically lasts 90 days. The new agenda states that the proposed Silica Standard is expected to be issued sometime in July. At press time, it remained under review of the Office of Management and Budget.

Several final rules also are expected to be issued soon, including an update to the agency's recordkeeping and reporting requirements (July); a rule addressing slip, trip and fall hazards (November); and a rule on confined spaces in construction (December).

(see page 5 for information on Crystalline Silica Exposure)

OSHA's Search for Amputation Hazards Reveals Much More

OSHA inspectors visited a workplace as part of the agency's National Emphasis Program for amputations. As expected, violations were identified relating to unguarded machinery and gears and unexpected start-up of equipment during maintenance and setup. But they also uncovered a number of other problems not specifically related to amputations. A total of 22 serious violations were identified for issues including confined space hazards, lack of a respiratory protection program, and unprotected platforms. The proposed fines totaled more than $50,000.

The OSHA officer in charge advised that, "An employer shouldn't wait for an OSHA inspection to address workplace safety and health issues to prevent injury and illnesses."

Top tips to avoid amputations

Every year, thousands of employees lose fingers, hands, feet, and other body parts. This happens as a result of compression, crushing, or when body parts get caught between or struck by objects.

According to OSHA, most amputations involve fingertips, and most occur when employees operate unguarded or inadequately safeguarded equipment. Examples are mechanical power presses, power press brakes, powered and nonpowered conveyors, printing presses, food slicers, meat grinders, band saws, and slitters.

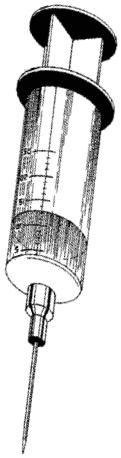
Identify and avoid amputation hazards through guarding, safe work practices, employee training, and administrative controls. According to OSHA, machine guarding is the best means of prevention.

Guards provide physical barriers to hazardous areas. They should be secure and strong, and employees should not be able to bypass, remove, or tamper with them. Guards should not obstruct the operator's view or prevent employees from working.

Devices help prevent contact points of operation and may replace or supplement guards. Devices can interrupt the normal cycle of a machine when the operator's hands are at the point of operation.

Source: safety.blr.com

Reduce your risk - Get Vaccinated



What is shingles?

- ☐ Shingles is a disease that causes a painful, blistering rash. One in five people with shingles will have severe, long-term pain after the rash heals.
- ☐ Almost all older adults can get shingles. About one in three people will develop the disease during their lifetime.
- ☐ Shingles is more common and more serious in older adults. Nearly 1 million Americans get shingles every year and about half of them are 60 years old and older.

How can the risk of shingles and long-term pain from shingles be reduced?

- ☐ A new vaccine against shingles has been developed and is recommended for people 60 years old and older.
- ☐ You can reduce your risk of shingles and long-term pain by getting the vaccine.
- ☐ In a clinical trial involving people 60 years old and older, the shingles vaccine prevented long-term pain in two out of three people who got vaccinated and prevented the disease in about half of them.

Signs & Symptoms of Pertussis

Pertussis (whooping cough) can cause serious illness in infants, children and adults. The disease usually starts with cold-like symptoms and maybe a mild cough or fever. After 1 to 2 weeks, severe coughing can begin. Unlike the common cold, pertussis can become a series of coughing fits that continues for weeks.

In infants, the cough can be minimal or not even there. Infants may have a symptom known as “apnea.” Apnea is a pause in the child’s breathing pattern. Pertussis is most dangerous for babies. About half of infants younger than 1 year of age who get the disease are hospitalized.
Pertussis can cause violent and rapid coughing, over and over, until the air is gone from the lungs and you are forced to inhale with a loud “whooping” sound. This extreme coughing can cause you to throw up and be very tired. The “whoop” is often not there and the infection is generally milder (less severe) in teens and adults, especially those who have been vaccinated.

Vaccines (shots) help prevent dangerous and sometimes deadly diseases. National Immunization Awareness Month is the perfect time to promote vaccines and remind family, friends, and co-workers to get caught up on their shots.

Vaccines

The best way to prevent pertussis (whooping cough) among infants, children, teens, and adults is to get vaccinated. Also, keep infants and other people at high risk for pertussis complications away from infected people.

In the United States, the recommended pertussis vaccine for infants and children is called DTaP. This is a combination vaccine that protects against three diseases: diphtheria, tetanus and pertussis.
Vaccine protection for these three diseases fades with time. Before 2005, the only booster available contained protection against tetanus and diphtheria (called Td), and was recommended for teens and adults every 10 years. Today there is a booster for preteens, teens and adults that contains protection against tetanus, diphtheria and pertussis (Tdap).

The easiest thing for adults to do is to get Tdap instead of their next regular tetanus booster-that Td shot that they were supposed to get every 10 years. The dose of Tdap can be given earlier than the 10-year mark, so it is a good idea for adults to talk to a healthcare provider about what is best for their specific situation.

Source: cdc.gov

HazardAlert: Combustible Dust Explosions

Combustible dusts are fine particles that present an explosion hazard when suspended in air in certain conditions. A dust explosion can be catastrophic and cause employee deaths, injuries, and destruction of entire buildings. In many combustible dust accidents, employers and employees were unaware that a hazard even existed. It is important to determine if your company has this hazard, and if you do, you must take action now to prevent tragic consequences.

How Dust Explosions Occur

In addition to the familiar fire triangle of oxygen, heat, and fuel (the dust), dispersion of dust particles in sufficient quantity and concentration can cause rapid combustion known as a deflagration. If the event is confined by an enclosure such as a building, room, vessel, or process equipment, the resulting pressure rise may cause an explosion. These five factors (oxygen, heat, fuel, dispersion, and confinement) are known as the "Dust Explosion Pentagon". If one element of the pentagon is missing, an explosion cannot occur.

Catastrophic Secondary Explosions

An initial (primary) explosion in processing equipment or in an area where fugitive dust has accumulated may dislodge more accumulated dust into the air, or damage a containment system (such as a duct, vessel, or collector). As a result, if ignited, the additional dust dispersed into the air may cause one or more secondary explosions. These can be far more destructive than a primary explosion due to the increased quantity and concentration of dispersed combustible dust. Many deaths in past accidents, as well as other damage, have been caused by secondary explosions.

Industries at Risk

Combustible dust explosion hazards exist in a variety of industries, including: agriculture, chemicals, food (e.g., candy, sugar, spice, starch, flour, feed), grain, fertilizer, tobacco, plastics, wood, forest, paper, pulp, rubber, furniture, textiles, pesticides, pharmaceuticals, tire and rubber manufacturing, dyes, coal, metal processing (e.g., aluminum, chromium, iron, magnesium, and zinc), recycling operations, and fossil fuel power generation (coal).

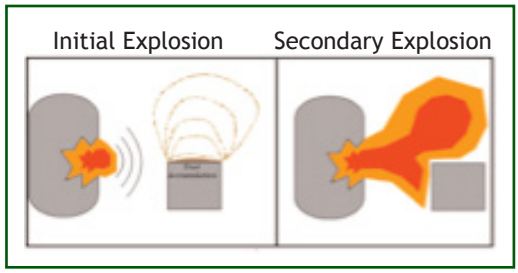
Prevention of Dust Explosions

To identify factors that may contribute to a explosion, OSHA recommends a thorough hazard assessment of:

- All materials handled;
- All operations conducted, including byproducts;
- All spaces (including hidden ones); and
- All potential ignition sources.

Dust Control Recommendations

- Implement a hazardous dust inspection, testing, housekeeping, and control program;
- Use proper dust collection systems and filters;
- Minimize the escape of dust from process equipment or ventilation systems;
- Use surfaces that minimize dust accumulation and facilitate cleaning;
- Provide access to all hidden areas to permit inspection;
- Inspect for dust residues in open and hidden areas at regular intervals;
- If ignition sources are present, use cleaning methods that do not generate dust clouds;
- Use only vacuum cleaners approved for dust collection; and
- Locate relief valves away from dust deposits.



Ignition Control Recommendations

- Use appropriate electrical equipment and wiring methods;
- Control static electricity, including bonding of equipment to ground;
- Control smoking, open flames, and sparks;
- Control mechanical sparks and friction;
- Use separator devices to remove foreign materials capable of igniting combustibles from process materials;
- Separate heated surfaces from dusts;
- Separate heating systems from dusts;
- Select and use industrial trucks properly;
- Use cartridge activated tools properly; and
- Use an equipment preventive maintenance program.

Injury and Damage Control Methods

- Separation of the hazard (isolate with distance);
- Segregation of the hazard (isolate with a barrier);
- Deflagration isolation/venting;
- Pressure relief venting for equipment;
- Direct vents away from work areas;
- Specialized fire suppression systems;
- Explosion protection systems;
- Spark/ember detection for suppression activation;
- Develop an emergency action plan; and
- Maintain emergency exit routes.

Applicable OSHA Requirements Include:

- §1910.22 Housekeeping
- §1910.307 Hazardous Locations
- §1910.1200 Hazard Communication
- §1910.269 Electric Power Generation, Transmission and Distribution (coal handling)
- §1910.272 Grain Handling Facilities
- General Duty Clause, Section 5(a)(1) of the Occupational Safety and Health Act (Employers must keep workplaces free from recognized hazards likely to cause death or serious physical harm).

"Crystalline Silica Exposure"

Health Hazard Information for Construction Employees

What is crystalline silica?

Crystalline silica is a basic component of soil, sand, granite, and many other minerals. Quartz is the most common form of crystalline silica. Cristobalite and tridymite are two other forms of crystalline silica. All three forms may become respirable size particles when workers chip, cut, drill, or grind objects that contain crystalline silica.

What are the hazards of crystalline silica?

Silica exposure remains a serious threat to nearly 2 million U.S. workers, including more than 100,000 workers in high risk jobs such as abrasive blasting, foundry work, stonecutting, rock drilling, quarry work and tunneling. The seriousness of the health hazards associated with silica exposure is demonstrated by the fatalities and disabling illnesses that continue to occur in sandblasters and rockdrillers. Crystalline silica has been classified as a human lung carcinogen. Additionally, breathing crystalline silica dust can cause silicosis, which in severe cases can be disabling, or even fatal. The respirable silica dust enters the lungs and causes the formation of scar tissues, thus reducing the lungs' ability to take in oxygen. There is no cure for silicosis. Since silicosis affects lung function, it makes one more susceptible to lung infections like tuberculosis. In addition, smoking causes lung damage and adds to the damage caused by breathing silica dust.

What are the symptoms of silicosis?

Silicosis is classified into three types: chronic/classic, accelerated, and acute.

Chronic/classic silicosis, the most common, occurs after 15-20 years of moderate to low exposures to respirable crystalline silica. Symptoms associated with chronic silicosis may or may not be obvious: therefore, workers need to have a chest x-ray to determine if there is lung damage. As the disease progresses, the worker may experience shortness of breath upon exercising and have clinical signs of poor oxygen/carbon dioxide exchange. In the later stages, the worker may experience fatigue, extreme shortness of breath, chest pain, or respiratory failure.

Accelerated silicosis can occur after 5-10 years of high exposures to respirable crystalline silica. Symptoms include severe shortness of breath, weakness, and weight loss. The onset of symptoms takes longer than in acute silicosis.

Acute silicosis occurs after a few months or as long as two years following exposures to extremely high concentrations of respirable crystalline silica. Symptoms of acute silicosis include severe disabling shortness of breath, weakness, and weight loss, which often leads to death.

Where are construction workers exposed to crystalline silica?

Exposure occurs during many different construction activities. The most severe exposures have occurred during abrasive blasting with sand to remove paint and rust from bridges, tanks, concrete structures, and other surfaces. Other construction activities that may result in severe exposure include: jack hammering, rock/well drilling, concrete missing, concrete drilling, brick and concrete block cutting and sawing, tuck pointing, and tunneling operations.

How is OSHA addressing exposure to crystalline silica?

OSHA has an established Permissible Exposure Limit, or PEL, which is the maximum amount of crystalline silica to which workers may be exposed during an 8-hour shift (29 CFR 1926.55, 1910.1000). OSHA also requires hazard communication training for workers exposed to crystalline silica, and requires a respirator program until engineering controls are implemented. Additionally, OSHA has a National Emphasis Program (NEP) for Crystalline Silica exposure to identify, reduce, and eliminate health hazards associated with occupational exposures.

What can employers/employees so to protect against exposures to crystalline silica?

- Replace crystalline silica materials with safer substitutes, whenever possible.
- Provide engineering or administrative controls, where feasible, such as local exhaust ventilation, and blasting cabinets. Where necessary to reduce exposures below the PEL, use protective equipment or other protective measures.
- Use all available work practices to control dust exposures, such as water sprays.
- Wear only a N95 NIOSH-certified respirator, if respirator protection is required. Do not alter the respirator. Do not wear a tight-fitting respirator with a beard or mustache that prevents a good seal between the respirator and the face.
- Wear only a Type CE abrasive-blast supplied-air respirator for abrasive blasting.
- Wear disposable or washable work clothes and shower if facilities are available. Vacuum the dust from your clothes and change into clean clothing before leaving the work site.
- Participate in training, exposure monitoring, and health screening and surveillance programs to monitor any adverse health effects caused by crystalline silica exposures.
- Be aware of the operations and the job tasks creating crystalline silica exposures in your workplace environment and know how to protect yourself.
- Be aware of the health hazards related to exposures to crystalline silica. Smoking adds to the lung damage caused by silica exposures.
- Do not eat, drink, smoke, or apply cosmetics in areas where crystalline silica dust is present. Wash your hands and face outside of dusty areas before performing any of these activities.
- Remember: If it's silica, it's not just dust.

Source: osha.gov

About Smoke Alarms

A working smoke alarm:

A properly installed and maintained smoke alarm is the only thing in your home that can alert you and your family to a fire 24 hours a day, seven days a week. Whether you're awake or asleep, a working smoke alarm is constantly on alert, scanning the air for fire and smoke.

According to the National Fire Protection Association, almost two-thirds of home fire deaths resulted from fires in properties without working smoke alarms. A working smoke alarm significantly increases your chances of surviving a deadly home fire.

Types of smoke alarms available:

There are many different brands of smoke alarms available on the market, but they fall under two basic types: **ionization** and **photoelectric**.

It cannot be stated definitively that one is better than the other in every fire situation that could arise in a residence. Because both ionization and photoelectric smoke alarms are better at detecting distinctly different, yet potentially fatal fires, and because no one can predict what type of fire might start in a home, the **USFA recommends that every residence and place where people sleep be equipped with:**

- **Both ionization AND photoelectric smoke alarms, OR**
- **dual sensor smoke alarms, which contain both ionization and photoelectric smoke sensors**

In addition to the basic types of alarms, there are alarms made to meet the needs of people with hearing disabilities. These alarms may use strobe lights that flash and/or vibrate to assist in alerting those who are unable to hear standard smoke alarms when they sound.

Smoke alarm maintenance:

Is your smoke alarm still working? Smoke alarms must be maintained! A smoke alarm with a dead or missing battery is the same as having no smoke alarm at all.

A smoke alarm only works when it is properly installed and maintained. Depending on how your smoke alarm is powered (9-volt, 10-year lithium, or hardwired), you'll have to maintain it according to manufacturer's instructions. General guidelines for smoke alarm maintenance:

Smoke alarm powered by a 9-volt battery

- Test the alarm monthly.
- Replace the batteries at least once per year.
- The entire smoke alarm unit should be replaced every 8-10 years.

Smoke alarm powered by a 10-year lithium (or "long life") battery

- Test the alarm monthly.
- Since you cannot (and should not) replace the lithium battery, the entire smoke alarm unit should be replaced according to manufacturer's instructions.

Smoke alarm that is hardwired into the home's electrical system

- Test the alarm monthly.
- The backup battery should be replaced at least once per year.
- The entire smoke alarm unit should be replaced every 8-10 years.

Source: www.usfa.fema.gov

Keep Extinguishers in Working Order

Portable fire extinguishers can be vital in preventing a small fire from turning into a major catastrophe. But the devices provide no protection if they are not properly maintained. OSHA offers the following rules regarding fire extinguishers:

- The employer is responsible for maintaining and testing all portable fire extinguishers in the workplace.
- Extinguishers or hoses must be visually inspected at least once a month.
- A full maintenance check should be performed on all extinguishers at least once annually, and records of this check should be kept for one year.
- Dry chemical extinguishers that require a 12-year hydrostatic test should be emptied for full maintenance every six years. Extinguishers with non-refillable disposable containers are exempt from this requirement.
- Hydrostatic testing should be performed by trained individuals with suitable testing equipment and facilities.
- When portable extinguishers are removed for maintenance or recharging, the employer must provide an alternative that offers equal protection.

Source: safetyandhealthmagazine.com

Livestock Haulers Receive Rest-Break Exemption for Summer

Washington – Drivers who transport livestock have received a temporary exemption from the mandated rest break that went into effect July 1 as part of the Federal Motor Carrier Safety Administration's hours-of-service rule.

Under the rule, drivers must take one 30-minute break during the first eight hours of a shift. The exemption, granted for 90 days to carriers that do not have poor safety records, follows a late-June request from a group of livestock producers and drivers who stated that exposing live animals to hot weather while a driver stops the vehicle for 30 minutes would endanger the animals' welfare without benefiting public safety. Industry guidelines advise drivers to limit stopping during hot weather because the airflow generated by moving vehicles helps keep animals cool.

FMCSA stated in the Federal Register notice that the waiver will be published July 11, which would make the exemption active until Oct. 9.

Source: nsc.org

Power Tool Safety

Appropriate personal protective equipment such as safety goggles and gloves must be worn to protect against hazards that may be encountered while using hand tools.

Workplace floors shall be kept as clean and dry as possible to prevent accidental slips with or around dangerous hand tools.

Power tools must be fitted with guards and safety switches; they are extremely hazardous when used improperly. The types of power tools are determined by their power source: electric, pneumatic, liquid fuel, hydraulic, and powder-actuated.

To prevent hazards associated with the use of power tools, workers should observe the following general precautions:

- Never carry a tool by the cord or hose.
- Never yank the cord or the hose to disconnect it from the receptacle.
- Keep cords and hoses away from heat, oil, and sharp edges.
- Disconnect tools when not using them, before servicing and cleaning them, and when changing accessories such as blades, bits, and cutters.
- Keep all people not involved with the work at a safe distance from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool.
- Avoid accidental starting. Do not hold fingers on the switch button while carrying a plugged-in tool.
- Maintain tools with care; keep them sharp and clean for best performance.
- Follow instructions in the user's manual for lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance when operating power tools.
- Wear proper apparel for the task. Loose clothing, ties, or jewelry can become caught in moving parts.
- Remove all damaged portable electric tools from use and tag them: "Do Not Use."

Source: osha.gov

Montana Safety

Services Council

The Montana Safety Services Council is a non-profit educational association established in 1993 to provide safety and health related services. These services include safety training, consulting, technical assistance, seminars and program development to our membership and the public at large. We currently serve over 140 business in all areas of service, manufacturing, construction, mining, medical, retail, wholesale, transportation, and refining throughout Montana, Idaho, Washington and the Dakotas.

Our Mission Statement
The Council is dedicated to the enhancement of safety through education and training programs.

Our goal is to serve and assist owners, contractors, labor, as well as the general public to advance and improve safety awareness throughout the region.

The Council recognizes that if improvement in safety performance and awareness is to be achieved, a unified effort involving business owners, contractors and our labor force must be realized.

Our commitment is to focus on developing this unified effort in ortder to enhance the safety and welfare of workers throughout our region.

Upcoming Training

First Aid / CPR
August 27, 2013

Forklift Train-the-Trainer
August 28, 2013

Globally Harmonized System
For Employers
September 3, 2013

Globally Harmonized System
For Employees
September 18, 2013

For details, visit our website
www.mssc.org

Thank You to the companies who renewed their MSSC membership:

360 Office Solutions, Inc.
Ace Electric
All American Pharmaceutical & Natural Foods
Big Sky Linen & Uniform
Diamond Recovery Systems, Inc
Ezzies Wholesale Inc.
Finest Oil Company
HI-Ball Trucking Inc.
Hospital Laundry Services
Montana Waste Systems Inc.
Nor Pac Sheet Metal, Inc.
Safway Services LLC
T. W. Enterprises, Inc.

Welcome New Members:

Production Management Solutions. LLC
Tanco Engineering, Inc.

19th Annual
LEPC/ASSE/ MSSC
Safety Conference

Save the Dates
March 12 & 13, 2014
at the Crowne Plaza