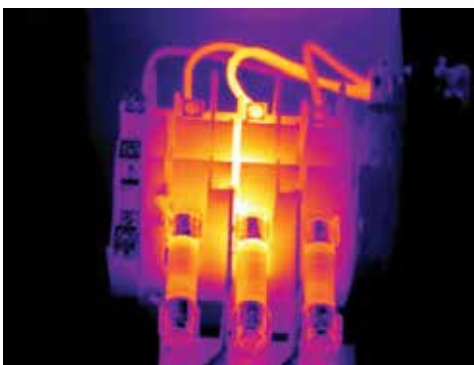


## SAFETY PAYS: Finding—and Fixing—the Hot Spots



HSB's infrared scanning technology detects hot spots (light colored) in electrical connections.

"Infrared (IR) scanning technology is used to find electrical issues that indicate a potential problem that can lead to a breakdown, damage equipment or otherwise disrupt operations that are critical to grain-handling facilities," said Bret Bush, director risk management services for The Hartford Steam Boiler Inspection and Insurance Co. (HSB).

HSB, a company with a 150-year history in providing risk management services, has been offering infrared thermographic surveys extensively for more than 20 years, said Bush, adding the company is definitely seeing growth in that segment of its risk control services. Austin Mutual understands the value of the technology and is recommending HSB's infrared thermographic services to our policyholders with grain handling facilities.

### What is an Infrared Thermography Survey?

HSB's infrared thermographic surveys are examinations of an electrical system's components, as well as mechanical equipment and motors, by a certified professional with a FLIR Thermacam infrared imaging system—a specialized camera that senses infrared emissions invisible to the human eye. These emissions increase with temperature. That thermal data is then converted into an image, revealing any hot spots that would indicate problems, such as loose connections, overloaded circuits or phases, or excessive or unwanted friction.

Once the imaging is done, HSB provides the customer with a full report including: images indicating problem areas; a "critical," "severe," "alert" or "advisory" rating depending on the potential effect that a failure in that problem area will have on operations and productions; an estimated cost of repairing now versus repairing once a failure has occurred; a recommendation of action; and an estimated downtime to make the repair.

One survey, for example, indicated a problem in the main breaker in a feed mill. Categorized as "severe," the cost estimate to fix the problem now was \$100 versus repair costs of \$4,000 should there be a failure.

*Continued on next page*



HSB Director Risk Management Services  
Bret Bush

If you could determine that a \$100 repair in one of your facility's main breakers could avoid a failure that would add up to several thousands of dollars in repairs—not to mention the downtime or possibility of a fire or injury—would you want that information?

It's safe to say most business managers would answer with a resounding "Yes!" That's why a technology called infrared thermography is gaining traction among businesses—including those with grain handling facilities—where electrical failures can lead to expensive and sometimes disastrous results.

# REDUCE CHANCE OF STORM DAMAGE

BY ZACK TESAR  
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Snow and freezing temperatures may soon be behind us, but the storms of spring and summer are just ahead. Tornadoes, high winds, hail and heavy rains can play havoc with your facility and inventory, so now's the time to do what you can to minimize the chance of storm damage.

Start with a simple walk-through of your site, noting outside repairs that need to be made or issues that should be addressed. Check for shingles that are curled or loose and could easily be blown off by winds. Are there any loose pieces of metal on any of your structures? Taking action on these needed repairs can prevent large sections of roof or siding being blown off by the wind and exposing product inside to the elements.

Another suggestion that can help prevent liability claims and disputes with neighbors is to check for any light-weight, unsecured items on your property. Austin Mutual has received claims in cases where items like an empty poly tank or pieces of roofing material are picked up by wind and thrown into a neighbor's property. While those claims for damages are generally denied because the insured did nothing wrong, it can negatively impact the relationship between the two parties. If it's shown that you were aware of the hazard, however, you could be liable. You might also have a disgruntled neighbor.

If you do suffer a weather-related loss such as roof damage, be prepared to take immediate action to try and prevent any contents or stock from being damaged. For example, if shingles or even sections of the roof itself are gone, tarp over the damaged area as soon as possible. This can help to prevent grain, fertilizer or any other contents from getting wet. If possible, move the contents out from underneath the damaged sections. In some instances, the damage to the product exceeds the cost to the structure itself.

In the event that moisture does affect your product, it's usually best to set it aside rather than dispose of it. Depending on the product, Austin Mutual has contacts that may be interested in purchasing it for salvage. Corn and beans are an example. Even if you think the product is completely ruined, give us a chance to try to recover any possible salvage value. It may help reduce your loss.

At Austin Mutual, we understand most weather-related losses cannot be prevented. We also know steps can be taken to increase your chance of reducing—and sometimes preventing—storm damage loss. That's a positive for everyone involved. ▶

## SAFETY PAYS...

*Continued from page 1*

Downtime to make the repair was estimated at one to two days. Another example of a "critical" issue was a problem in a main transformer that would cost \$5,000 if repaired now versus \$78,000 and a very lengthy downtime if there was a failure.

"We have a lot of success stories where a potential issue is identified by the thermographer, and action was taken and a potential problem

eliminated," said Bush. "Policyholders are really appreciative when that happens. They don't want a shutdown or the possibility of a fire."

### Proactive risk management

Unfortunately, the dangers in not identifying potential failures go beyond the cost of repairs or downtime. "With grain handling facilities you are dealing with airborne dust or surface accumulate," explained Bush. "There is real concern that presenting an ignition source—like hot bearings, overheated motors, or sparks and

arcs—can lead to an explosion. Even exposures like a motor or conveyor belt can create an ignition source. The infrared thermographer can scan everything from electrical components to motors, machinery and mechanical systems. With the resulting information, any problems discovered can be addressed. What we're providing is a proactive approach to risk management."

If you would like additional information on HSB's Thermography Services, please contact your Austin Mutual risk consultant. ▶



**MINNESOTA** - Michelle Smith, principal with Minnesota OSHA's Workplace Safety Consultation, spoke to members of the Ag Cooperative Safety Directors of Minnesota during the January 2018 meeting. She discussed new rules that update and clarify Walking and Working Surfaces and Fall Protection Standards. The rules, implemented in September 2017, add training and inspection requirements to better protect workers. The next meeting will be held on March 14, 2018, at the Kandiyhi Power Plant in Spicer.

# STAND-DOWN FOR FALL PROTECTION CAMPAIGN



## BY BRYON BERG

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OSHA, the National Safety Council and many other industry-leading groups are partnering in support of the National Safety Stand-Down to Prevent Falls in Construction campaign May 7-11, 2018. The campaign raises fall hazard awareness and prevention in an effort to stop fatalities and injuries.

According to OSHA, falls are consistently among the leading causes of fatalities and injuries in all industries, including agriculture and transportation, with an average of 345 fatalities and 202,066 serious injuries annually.

With this national campaign and the release of revised OSHA Walking and Working Surfaces and Fall Protection Standards, we have an opportunity to focus on the seriousness of falls in workplaces. The sponsors of the National Safety Stand-Down are encouraging everyone to join them in the Stand-Down campaign by following these steps:

**PLAN ahead to perform the job safely**—consider the hazards, what tasks will be involved and what safety equipment may be needed to complete each task.

**PROVIDE the right safety equipment**—including necessary ladders, scaffolds, guarding, harnesses, personal fall arrest systems and other safety gear.

**TRAIN everyone to use the equipment and use it safely**—everyone should be trained on proper use of the equipment for each job.

Here are some suggestions for planning your own Stand-Down:

1. Organize and plan to discuss the standards that apply. Decide when, where and who will lead.
2. Invite business partners, board members, vendors and anyone else associated with the company to participate.
3. Review the company's fall prevention program/policy and ask:
  - a. Has the company experienced fatalities, injuries or near misses?
  - b. What hazards or possible hazards exist?
  - c. What types of falls could happen?
  - d. What needs improvement?
  - e. What training have we provided?
  - f. What equipment has been provided? Is better equipment available?
4. Decide what type of information, presentation, tool-box training, etc., will be best for the workplace, setting and employees.
5. Encourage participation and make it positive and interactive. Let employees talk about their experiences and encourage them to make suggestions.
6. Follow up by making necessary changes and incorporating Plan, Provide and Train for every task performed.

Campaigns such as this, along with federal regulations and industry standards, provide specific measures and recommendations for worker

**National Safety STAND-DOWN**  
TO PREVENT FALLS IN CONSTRUCTION  
MAY 7-11, 2018

**Stop Falls Stand-Down**

- Plan a toolbox talk or other safety activity
- Take a break to talk about how to prevent falls
- Provide training for all workers

For more information:  
[www.osha.gov/StopFallsStandDown](http://www.osha.gov/StopFallsStandDown)  
#StandDown4Safety • (800) 321-OSHA (6742)

OSHA Occupational Safety and Health Administration  
CDC NIOSH  
Safety Pays. Falls Cost.

protection and remind us falls happen in every industry. Taking the time to hold a Stand-Down at your facility can help prevent employee injuries and deaths.

Resources are available to help organize your own Stand-Down. If assistance is needed, consult with your safety professional, an outside safety organization, OSHA, NSC, your insurance agent or loss control representative. For more information please see the links below. ▶

### National Safety Stand-Down guidance, resources, and materials:

<https://www.osha.gov/StopFallsStandDown/>

### OSHA'S Walking and Working Surfaces and Fall Protection:

[www.osha.gov/walking-working-surfaces](http://www.osha.gov/walking-working-surfaces)  
29 CFR 1926, Subpart M  
29 CFR 1910 Subpart



**SOUTH DAKOTA** - The South Dakota Ag Cooperative Safety Directors met Jan. 17, 2018, at Mitchell Technical Institute in Mitchell, SD. Jon Puetz, director of loss prevention-safety & health compliance specialist with Boen & Associates, Inc., provided a regulatory update that included contractor liability issues with OSHA, recognizing learning styles in terms of safety training, OSHA 300 electronic reporting site and navigating the OSHA website. The next meeting will be on March 21, 2018. Location to be determined.

# DRY FERTILIZER DO'S AND DON'TS



## BY KENT VOIGT

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To help you prepare for the spring fertilizer application season, let me share two of the most common issues I find during my walk-through inspections of dry fertilizer plants and then offer more in-depth information on safe handling and storing of sulfur:

### Issue #1: Fertilizer bins with no ID labels or incorrect product labels

While some products can be recognized by their distinct coloring, many more are very similar in color. Even when products such as white urea and red potash are easily identified by anyone who's in the business, a new seasonal employee put in a skid loader and tasked with filling overhead bins or a batch scale might be none the wiser. For example, although a product is red in color, if the bin is incorrectly labeled as 18-46-0, your new employee can load the wrong product, possibly leading to a costly mistake. Take time to label all bins correctly.

### Issue #2: Electrical cords stored in the corrosive fertilizer environment

The prongs on an extension cord can turn green from corrosion in as little as a few days when stored around fertilizer. That green corrosion causes resistance and when a cord is plugged into an electric source excess heat is created—much like a toaster. The receptacle end of the cord can be even more dangerous since corrosion on the hidden contacts are difficult to detect. When not being used, store extension cords and other

temporary electrical devices in a room or building that does not house fertilizer. Other important safety factors to consider include:

### Make housekeeping a priority

While OSHA requires that feed and grain operations have a scheduled housekeeping and maintenance program, fertilizer plants are not under similar mandatory regulations. That does not mean cleaning and maintaining fertilizer equipment should take a back seat. Since fertilizer is especially damaging to electrical and mechanical equipment, inspections, cleaning and maintenance should be a critical part of your operations. For instance, leaving a build-up of fertilizer between the cooling fins and a heavy dust coating on an electric motor during the entire off-season drastically shortens the motor's life and increases the risk of a fire.

### Keep it safe around sulfur

If your facility handles 85 or 90 percent sulfur, make sure employees know how to safely handle this product. The goal is to handle the product no more than necessary to help minimize dust formation. The more this product is ground into powdery dust, the greater the possibility of an explosion should a spark be introduced. Recently, a new fertilizer plant experienced an explosion which was contained in the leg. The source of the explosion is thought to be the conditioner located in the pit. This conditioner grinds up chunks of fertilizer before reaching the leg that transports product into the tower. It is thought that a spark ignited the sulfur. Since the explosion, the conditioner is shut off before sulfur is run through the system.

Another more serious incident occurred a few years ago in Minnesota. Damage to the nearly-new plant was close to \$1 million.

It was determined that as sulfur was being transported from the storage pile to the hopper or pit, there was spillage on the floor. After the skid loader made several trips driving on the spilled trail of sulfur, it was ground into a powder. The powdered product was then swept up and as it was going up the leg, a spark ignited it, blowing the leg open.

### Reducing the explosion factor

Following are steps to reduce the potential for sulfur dust explosions:

- Avoid using a screw auger to move sulfur.
- Drag conveyors are acceptable but avoid letting them run dry.
- After unloading bulk sulfur, another bulk product such as DAP or potash can be used to flush sulfur residue from the system.
- When filling an order, don't have sulfur be the last product to go into the scale or mixer.
- Try to keep the drop height of sulfur under 12 feet.
- Conveyors and storage systems should be grounded.
- When sulfur is in the vicinity, avoid activities that may create sparks such as scraping the skid loader or payload bucket on grates or hammering metal.
- Check inventory after off-loading sulfur to ensure there is no smoldering product in the pile. The risk of fire is increased at the end of transfer as the equipment is run dry and accumulated fines appear in the system.
- Most importantly, NEVER store sulfur and ammonium nitrate in the same building! NFPA 490, which addresses the storage of ammonium nitrate, bans the storage of these two products in the same structure. ▀



Corroded light fixture and electric plug demonstrate the corrosive nature of dry fertilizers; the mislabeled bin of red potash can lead to application errors.

# NH3 BULK PLANT PRE-SEASON INSPECTIONS



**BY CHAD MURRELL**

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Every year in North America there are numerous injuries and fatalities as a result of the unexpected release of anhydrous ammonia (NH3). As an important source of nitrogen fertilizer, NH3 plays a key role in the success of both your company and the producers you serve. As marketers of anhydrous ammonia, it's critical that you take measures required to ensure the safe storage and transfer of this hazardous material. As part of your Risk Management Plan (RMP), you should be conducting a documented pre-season inspection of your anhydrous ammonia bulk plants. Within that RMP, you should have an inspection checklist to guide you.

**Key items to inspect include:**

- Bulkhead protection—properly constructed or equivalent anchorage; check for weakness or sheer fittings
- Color-coding on piping and valves to indicate liquid and vapor
- Legible data plate
- Electrical panels, outlets and circuits; no exposed conductors
- Fire extinguishers—currently serviced, properly mounted with unobstructed access
- Suitable barriers to prevent damage by vehicle traffic
- Machine guarding to ensure safe operating conditions
- Signage and labels on tank including legible, up-to-date emergency contact information
- Transfer hoses—replace if damaged; if not damaged, include a “replace by” date
- Piping and components—leak-free and with adequate piping support
- Required PPE—in good condition and properly stored
- All gauges and thermometers
- Pull-away protection at risers

- Pressure relief valves—replace if corroded; if not, include a “replace by” date; ensure rain caps are present
- Emergency-use respirators—ensure that canisters are not expired
- Emergency shutoff devices
- All excess flow, hydrostatic relief and back pressure—check valves
- Safety water—available and sufficient
- Ensure that wheel chocks are available at risers
- Unattended storage tanks—secured by locking main shut-off valves to each tank; hose-ends locked

Completing a thorough, documented, pre-season inspection of your NH3 bulk plants and correcting any deficiencies goes a long way in preventing the unexpected release of anhydrous ammonia. It not only protects your employees, but also your customers, patrons and the general public.

Check your RMP to ensure it has not been more than five years since it was last submitted to the EPA. In addition, there are three- and five-year compliance and hazard reviews that must be documented through your RMP. If you have questions or concerns about current EPA risk management requirements, contact your Austin Mutual risk consultant. ▶



**IOWA** - A wide range of topics were covered at the Jan. 17, 2018, meeting of the Ag Cooperative Safety Directors of Iowa meeting, including a presentation on asbestos and open burning options by Nathan Stueve, environmental asbestos specialist with the Iowa DNR. Bo Salari with DBI/Sala Shur Sales and Marketing discussed fall protection and anchor points. A panel discussion on dicamba-type products included Iowa Extension weed specialist Dr. Bob Hartzler and insurance company representatives. The use of drones in the cooperative industry was covered by Tom Winkel, safety director at MaxYield Cooperative. The next meeting will be March 21, 2018, at the WinField United Distribution Facility in Story City.

## READY FOR SPRING STORMS...PAGE 2

Prepare facilities now!

## A NEW YEAR'S RESOLUTION TO KEEP



**By SCOTT SIMMONS**

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It is difficult to believe that we are already well into 2018. Many of us, myself included, have already been challenged with those pesky New Year's resolutions and have modified them accordingly.

Many of you have, or soon will be, speaking with our loss control team about the upcoming agronomy season. While Austin Mutual had a moderately profitable year in 2017, we

did experience an uptick in submitted claims. The one New Year's resolution that I am confident we can accomplish together is improved agronomy results. In order to be successful, here are a few things to remember:

- If you do not yet have a copy of a customer's crop plans for 2018, get it as quickly as possible.
- While mapping out planting, chemical applications or fertilizer intentions, be aware of any sensitive acreages or crops that may be in those areas, and note those concerns with your customer.
- Carefully and methodically review your customer's maps and have

them initial each page once a plan has been established (especially critical for those areas that may be dicamba-sensitive).

Following these steps and establishing a solid plan with your customers provides a greater opportunity for success in 2018. As Benjamin Franklin once said, "If you fail to plan, you are planning to fail!"

If you have any questions or concerns, please do not hesitate to contact your Austin Mutual risk consultant. They are here to help all of you succeed. My hope for all of you is an extremely profitable and loss-free 2018! ▶



**NEBRASKA** - A presentation on highway safety and distracted driving was given by Mark Segerstrom, road safety project coordinator for the Nebraska Safety Council, during the December 12, 2017, meeting of the Ag Cooperative Safety Directors of Nebraska. The business meeting included discussion of a proposal to change the association's by-laws. Members will discuss proposed changes and elect new officers during the meeting on March 13, 2017, at the Quality Inn & Conference Center in Grand Island.