

# Iowa-Illinois Safety Council Safety Award Program

*Exemplifying and Representing  
Continuously Improving Organizations*

Submissions from 2015 – Part 1  
(Awards given at the 2016 PDC)

Daily, employees at Hull Agropur move 55 gallon barrels throughout the facility. We now have a barrel mover to help with that task.



Guarding was added to the discharge of the 640 inverter to protect employees from a trip hazard.



This machine flips 40lbs cheese blocks (per customer requirements). Prior to installation employees would have to manually flip each of the 40lbs blocks of cheese.





Yellow grating is being used for steps to production decks. The yellow grating provides better visibility of the steps for employees.



**Date: February 2015**

**Location: Marshalltown Operating**

**Hazard: Slippery Running Boards**

**Before Picture**



**After Picture**



**Summary**

Plastic running boards on some vehicles are very slippery when wet. They are just made of hard plastic and have no traction.

**Summary**

Painted plastic running boards with a non-slip coating to provide traction when wet.

**Date: October 2015**

**Location: Marshalltown Operating**

**Hazard: Uncovered Solar Panel**

**Before Picture**



**After Picture**



**Summary**

A solar panel was being stored outside along a fence at Marshalltown Operating. Leads were covered, but panel was not.

**Summary**

Solar panels should be covered so as not to generate power and leads should be also be covered. We covered the panel with a tarp for proper storage when not in use.

**Date: September 2015**

**Location: Marshalltown Operating**

**Hazard: Garage Doors being left open**

**Before Picture**



**After Picture**



**Summary**

At Marshalltown Operating the overhead garage doors were frequently being left open when employees left the building. This left our building un-secure as these doors are not within a fenced in area and are wide open to the public.

**Summary**

Worked with Alliant Security and arranged for alarms to sound in Security dept. As of September 21<sup>st</sup>, a representative from Alliant Security will call someone in Marshalltown after 10 minutes of an overhead door being left open.



**Date: October 2, 2015**

**Location: ML Kapp 7<sup>th</sup> Floor**

**Hazard: First Aid – Fall Hazard**

**Before Picture**



**After Picture**



**Summary**

Fire system on 7<sup>th</sup> floor contained three pressure gauges that required visual verification to ensure system was charged. To read gauges personnel had to walk behind steam re-heat lines that had a large floor opening. The opening did have a four-inch toe-board, however opening was large enough for an employee to accidentally fall through

**Summary**

Rotated three pressure gauges 180 degree (not shown) so employee did not have to walk behind steam re-heat lines and placed two 8-foot fall protection barriers in front of steam lines.

## **HAZARD CONTROL: Ergonomic Strain from Handling Printing Cylinder Carts**

American Packaging Corporation's Flexographic Center of Excellence accomplished its 2015 goal of controlling a long existing ergonomic hazard present in the printing department of the facility. Press employees are required to manipulate printing cylinder carts that are used to setup and arrange cylinders for print jobs on every press. These cylinder carts when fully loaded can weigh up to a ton! The engineering control is a powered industrial cart mover that is capable of moving up to 20,000 lbs. at the turn of a button! Before the mover was brought in, carts would require two employees to manipulate and steer, now with the cart mover one employee is able to safely move and steer carts throughout the entire facility with all of the weight of the cart and force to move it absorbed by the powered cart mover.

## **Engineering Control: Powered Industrial Cart Mover**



**BEFORE:**



**AFTER:**



## **HAZARD CONTROL: Chemical Exposure from Hand Cleaning Printing Plates & Ergonomic Strain from Demounting Plates by Hand**

American Packaging Corporation's Flexographic Center of Excellence accomplished its 2015 goal of controlling multiple hazards present in the printing department where printing plates are processed after a print job has finished. Employees used to have to clean residual ink left on plates by hand with solvent and a brush. Now APC uses enclosed plate washing equipment that is able to efficiently clean mounted and demounted plates in enclosed chambers. Employees are safer and plates are cleaner thanks to these engineering controls.

After plates have been cleaned, employees used to have to demount the plates and mounting tape from the sleeve cylinders by hand. APC now has an ergonomic plate/tape demounter that absorbs all of the force required to remove plates and mounting tape from sleeves.

These engineering controls are state of the art technology for the flexographic industry and have significantly reduced hazard exposure to APC employees!

## **Engineering Controls: Enclosed Plate Washing Equipment and Ergonomic Plate/ Tape Demounter**



**BEFORE:**



**AFTER:**







Exposed Rotating Shaft



Installation of Machine  
Guarding





This motor was clamped on an I-beam on the third deck which could have fallen 40 ft and injure employees below.



By properly installing the motor with also a guard rail in place we have prevented a potentially fatal injury.

# TRAINING SPOTLIGHT

*Our Monthly ALCHEMY Safety Trainings take place at our Weekly Toolbox Meetings.*



**Mandatory Attendance**

**TOOLBOX**



**ThUrSdAy's**

**2:00 p.m.**

# Removed chains and put in self closing gate

## Safety concern

- Installed self closing gates to prevent falling.

## Safety solution

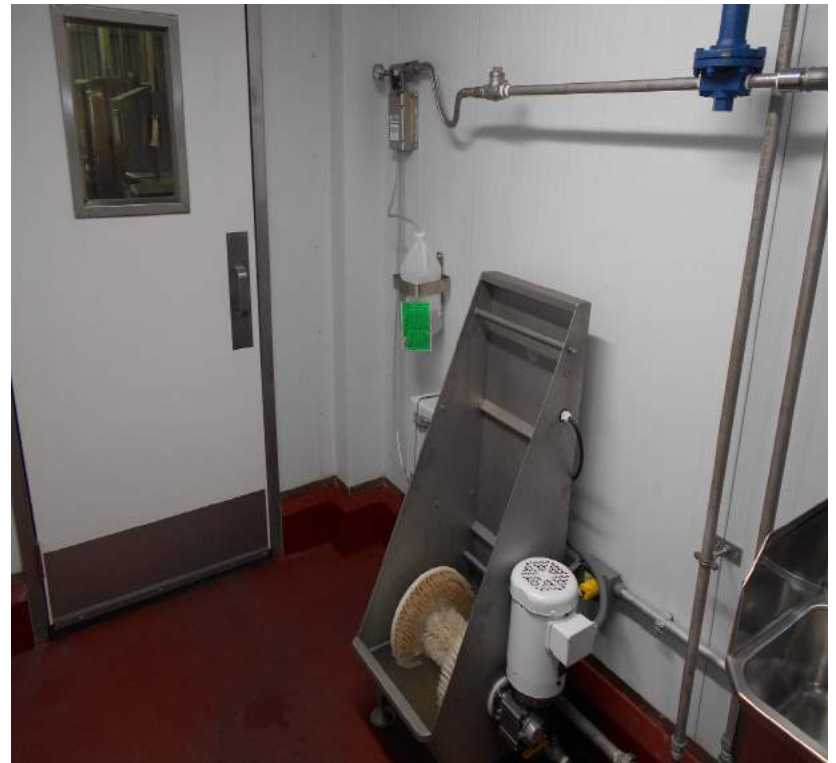


# Hands free chemical boot wash

## Safety concern

- Do not have to handle chemicals everyday. Installed boot wash with injected sanitizer.

## Safety solution





# Fall protection

## Safety concern

- Installed fall protection when cleaning trailers.

## Safety solution



Assembled a book with all numbered confined spaces with photos and sent to fire departments.

### **Safety concern**

- Did not have confined spaces numbered.

### **Safety solution**



# Ergonomics

## Safety concern

- Built stand so desk was at waist height.

## Safety solution





## **120 volt manlift lighting.**

Cords were always in the way. Had to watch out so you did not run over cord. Had to find outlet somewhere to plug into.





## **24 volt self contained cordless LED light.**

Designed a 24 volt LED light. It is bright. Very little battery draw. No cords or outlet required. Cord is self winding. A adjustable mount for light is located on lift or it can be hand held. Maintenance loves it.



## **8 pack for product filtration.**

Filter and basket were used to remove debris from product. 1,700 or more were changed weekly. It took a pull force of 35 lbs to remove each filter. Ergonomically hard on workers.



## **Hydro Sieve filter.**

The 8 pack filtration system was replaced by the Hydro Sieve. It is stationary and requires no filters to remove or clean.



## **Fall potential at unload bay.**

Employees unload tankers with potential to fall to concrete below catwalk.





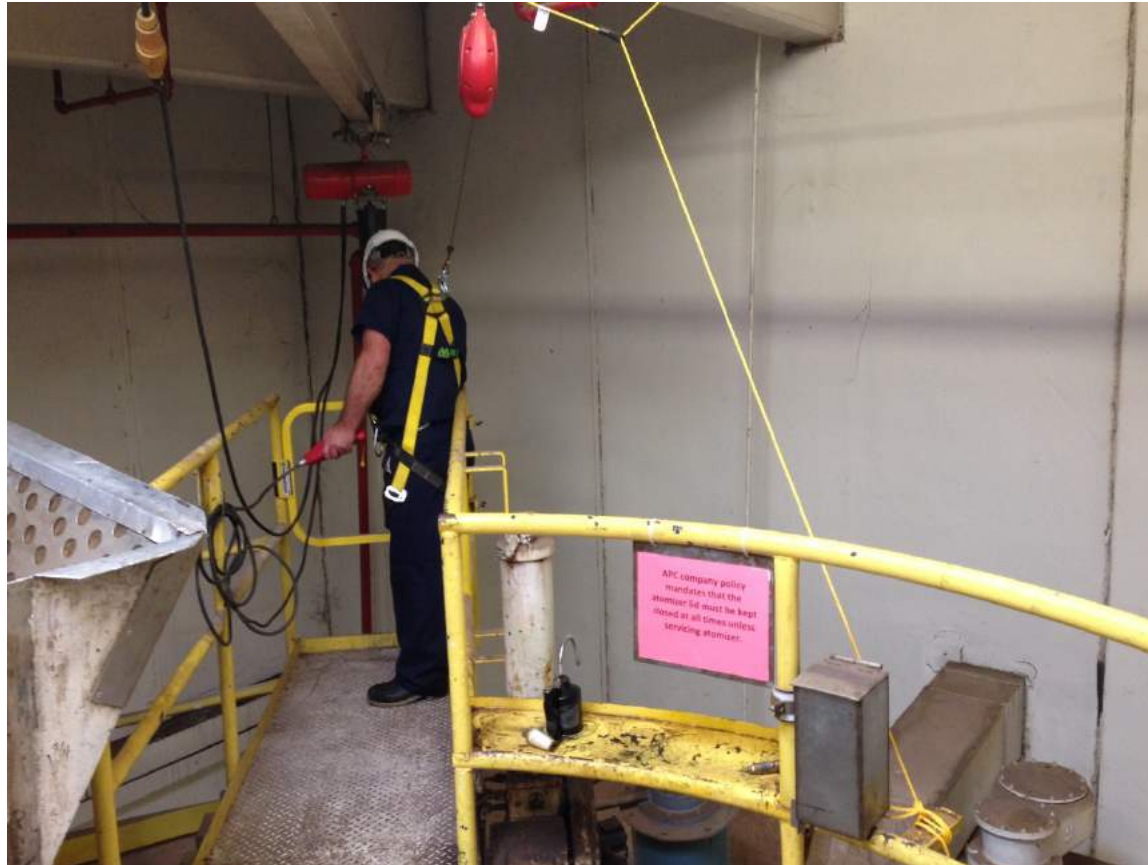
## **Fall potential at unload bay eliminated.**

Engineers designed fall protection hookup. Self retracting lifelines and body harnesses were purchased. Employees were trained. Self closing gates were added to front and back of existing handrail system.



## **Dryer maintenance fall potential.**

Dryer requires maintenance on spraying system to perform properly. Equipment that needs maintenance must be removed from dryer and lowered to ground for servicing.



## **Dryer maintenance fall protection eliminated.**

Engineer designed fall protection hookup point. Self retracting lifeline was installed. Employees were provided body harnesses and training.

End of Slides for APC – Dubuque Iowa

# Where's the fire extinguisher?

## Before

- We have fire extinguishers all over the building, many on columns. The problem is when your behind machinery or there are pallets stacked up, they are hard to locate.



## After

- We had all the columns and poles that hold fire extinguishers painted red from bottom to top. Now you can spot where a fire extinguisher is from any angle!





# It doesn't have to be expensive....

## Before

- Our pallets that hold reject glass left the ends of long pieces exposed to people running into the edges which are very sharp.



## After

- We build simple extensions that can be adjusted to move out and act as a barrier between the glass and people walking by it.



# It doesn't have to be expensive....

## Before

- Our pallets that hold reject glass left the ends of long pieces exposed to people running into the edges which are very sharp.



## After

- We build simple extensions that can be adjusted to move out and act as a barrier between the glass and people walking by it.



# Crane Help

## Before

- One of our production lines that does special windows has been struggling when they get large windows in how they handle them. Before they had to get a few people to manipulate the window to where they wanted it.



## After

- Now we have installed a crane at the point of use so they can easily handle large windows.



**Linemen often have to place cover-up on energized line from height which creates potential for strain, falls, awkward positioning, etc. (dramatization).**

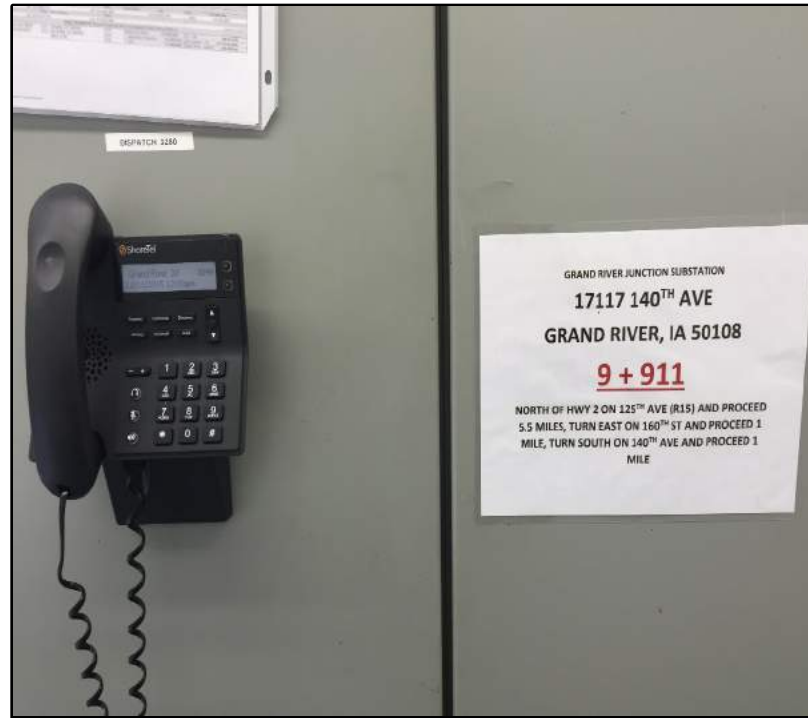


Whenever possible, the crews cover-up materials from the ground before setting the poles (actual photo).

**#1**



Substations are in remote locations which can make it difficult for first responders to find during an emergency. GPS is unreliable in most of the areas where subs are located (actual photo).



Employees posted detailed directions to the substation near the telephones in the substation control houses to ensure that first responders quickly find the emergency location (actual photo).

#2

**At a vehicle fueling area, a fuel dispenser was failing to engage the cutoff resulting in periodic small spills if an employee failed to be near the tank when full (dramatization).**



In addition to coaching employees and replacing the dispenser, a well-equipped spill kit was placed nearby and all employees were given details about its location and contents (actual photo).

**#3**

**A plant electrician isolated and located an overheated connector during an inspection (actual photo).**



Several connectors were repaired and secured safely in a cable tray (actual photo).

**#4**

# Railings

Railings were added to multiple locations to prevent accidental falls.





# Ammonia Sensor

Process waste water can contain elevated levels of Ammonia, so ammonia sensors were installed to aid in determining if PPE should be considered.



# Ware-House Bumpers



CJ installed bumpers and high visibility paint in high traffic warehouse areas to aid forklift drivers.

# CJ BIO Newsletter



## WEEKLY EHS COMMUNICATION NEWSLETTER

### HEADLINES

#### OSHA Form 300A

Companies are required to post their annual OSHA Form 300A, the Summary of Work-Related Injuries and Illnesses. This form is posted on the first floor of 101, in the hallway by the locker rooms, in a locked glass cabinet just north of the men's locker room. If you have any questions about what this information might mean, please contact Wendy Cortez at x3127 or Kelly Jessen at x3175.

#### Temporary Closure

Please continue to avoid the north side of Refinery Building 203 near the Hazardous Waste area. This primarily includes the exterior area. You may enter the interior area near the hazardous waste area, but will have to enter that area from an alternate entrance. There was a sulfuric acid leak two weeks ago in this area. Repairs and cleanup are taking longer than expected due to cold weather complications. The area has been covered with neutralizer, but it may take until ground thaw before we can complete cleanup. There is likely some soil impact in this area, and the ground will be frozen for some time.



CJ wants to make sure employees have the information they need to work safely. We do a weekly newsletter to all plant employees that presents the latest safety information, special interest stories and Environmental topics.

## Hazard Control Recognition Award Submission

- Marked floor to distinguish clearance in front of electrical panels and access to fire extinguishers





## Hazard Control Recognition Award Submission

- Implemented tip covers on chemical bottle tips to prevent accidental punctures



## Hazard Control Recognition Award Submission

- Implemented assistive lifting device for large panels



## Hazard Control Recognition Award Submission

- Implemented tether track trolley fall protection when working 4 feet above ground



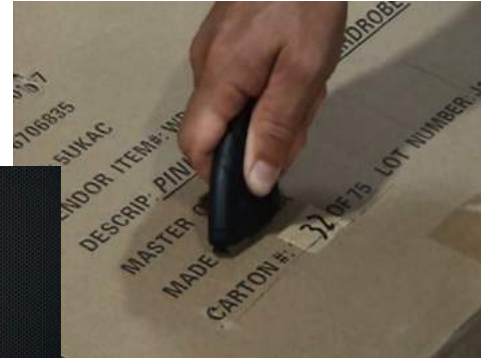
# Safe At Six Program

Colony Brands is a company that utilizes both forklift and pedestrian picking practices within its warehouse. Due to this inherent risk Colony Brands-Clinton has implemented a forklift and pedestrian safety program titled “Safe at Six”. The idea is when a forklift driver and pedestrian are within 6 feet of one another, they are required to stop and communicate. Since implementation the facility has had 0 forklift/pedestrian incidents or near misses.





# Utility Knife Safety



Colony Brands – Clinton created the company's first utility knife safety training video as well as implementing smart knives throughout the facility. Cuts are the 3<sup>rd</sup> highest cause of injuries at Colony Brands and even a higher risk in a returns facility like Clinton. This training video is now shown to employees throughout the company, helping eliminate knife related injuries. Colony Brands – Clinton has not had a knife related injury in 2015.

# Safe Employee of The Month



Clinton Fulfillment's Safe Employee of the Month program recognizes one employee each month for their commitment to safety within the facility.

With over 150 active employees, the competition is spirited, as employees vie for a chance to be named the Safe Employee of the Month.

The program is a point based system incorporating participation in weekly safety awareness games, hazard identification submissions and attendance. In addition, supervisors nominate one safety conscious employee each month also worth points.

The employee with the highest overall points is awarded the Safe Employee of the Month. In 2015, Clinton calculated 2,280 weekly safety awareness game points, 1,042 hazard identification points, 38,094 attendance points and 625 supervisor nomination points.

The Safe Employee of the Month enjoys the following perks to celebrate their hard work and achievement: a designated parking space, 25 dollars in company cash, award certificate, recognition on the Commitment to Zero wall and breakroom TV's, a t-shirt embroidered with their name and a VIP shopping experience at the Clinton Fulfillment employee store.

# Pedestrian Safety Video

Colony Brands – Peosta utilizes 50 forklifts, driving in areas where pedestrians are commonly present. This interaction is the highest hazard potential at Colony Brands –Peosta. The facility decided to make a custom Pedestrian Safety Training Video to train both pedestrians and forklift drivers on the hazards of their interactions as well as the correct way to interact. Since implementation the facility has not had a forklift/pedestrian incident or near miss.





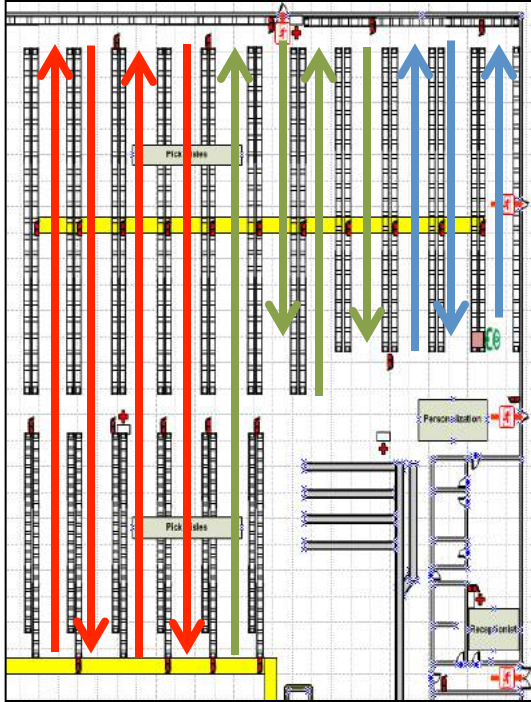
# Telescoping Truck Unloader

Colony Brands – Peosta unloads over 2000 overseas containers per year utilizing old telescoping truck unloaders. This position has been the number 1 position for employee sprains and strains over the past 10 years. In December of 2015 Colony Brands - Peosta has invested in an updated and improved version of the telescoping truck unloader with in trailer LED lighting, an adjustable front drop snoot for decreased lift distances, improved emergency stop locations, and photo electric parcel stop for improved on line product spacing.





# PCLS Program



Colony Brands – Peosta implemented a new program called PCLS (Picking Cart Logic Sequence). This program is being introduced to reduce walking distances on our concrete warehouse floor to decrease sprains, strains, pedestrian traffic, and general fatigue. PCLS works by reducing the cart picking aisles, by sequentially integrating orders together in a manner in which you visit the fewest locations and aisles. During a 3 week stretch during Colony Brands Peak Christmas Season pickers walked 750 miles less than the previous season. This would be slightly less than walking the entire length of the State of Illinois twice. The attached picture shows the total distance of the pick path. Before PCLS you may have to walk the entire pick path (Red, Green, and Blue Arrows) to fill a cart. With PCLS it's possible you would fill 2 or 3 carts in that same picking distance.

# Product Slotting Improvements



Colony Brands – Peosta has implemented several slotting improvements to improve ergonomics and housekeeping. Slotting is deciding what products are placed where in the facility. To reduce sprains and strains products over 10lbs are no longer placed over shoulder height, ladders are now placed in the racking reducing pallets spots but increasing safety. The maximum pieces of product placed in a location has been set to decrease the potential for floor product, more product is prepped to limit the garbage and cardboard that needs to be disposed of, and location heights have been limited to prevent overreaching.

# Employee Knowledge



Colony Brands – Peosta has created an employee safety knowledge game. This game is used to improve the employee knowledge in areas like pedestrian safety, ergonomics, accident prevention, etc... This program not only creates smarter but also safer employees in the workplace, while being able to reward employees for participating in Safety.

# Replacement of non-leading edge Self-retracting lifelines (SRL) with Leading Edge SRL's

In 2015 D. C. Taylor Co. removed non-leading edge SRL's being used on roofing projects and replaced them with Leading Edge SRL's in accordance with the 2012 ANSI Z359.14.

Specifying new SRL's removed the hazard of the wire rope in the older SRL's being severed due to contact with leading edges.



## EDGE ANGEL SRL FOR LEADING EDGE

HOME / PRODUCTS / SELF-RETRACTING LIFELINES

- Carabiner included
- SRL-LE
- Integrated shock absorber
- Durable, non-corrosive components

Length	<input type="text" value="50"/>	Part #:
Lifeline Material	Galvanized steel	10927
Connector Type	Steel Snap Hook	

Weight: 21 lb

ADD TO CART

+ 1 -

Move your mouse over image or click to enlarge

## Subject Self Retracting Devices in Leading Edge Applications

Region:	USA	Language:	EN	Number:	TB0002	Revision:	D
Total Page:	1	Page n°:	1	First Issue:	05/2000	Rev. Date:	01/20/2014

In August of 2012, American National Standard ANSI Z359.14 on Self Retracting Devices (SRD's) became effective. The Z359.14 standard includes significant changes to the design and testing of "Leading Edge" SRD's (known as SRL-LE's) and requires manufacturers to provide new information in the user instructions and on product markings. The list below highlights these important changes introduced by ANSI Z359.14.

- The test weight is increased by roughly 30% to 282 pounds (128kg).
- The test edge material is very sharp metal with an edge radius of .005 inches (.13mm) or less.
- An energy absorber is required and must not be separable from the SRD device or lifeline.
- Testing is expanded to include "offset" testing that tests sliding of the lifeline along the edge.
- Specific testing includes a check on retraction when used horizontally to confirm no slack can develop.
- Markings on the device and use instructions have been expanded to provide advice to equipment users about leading edge work.

Because of these new requirements Capital Safety recommends that SRD users working around sharp leading edges use SRL-LE models that are qualified to ANSI Z359.14 for such use, and that all future leading edge applications are addressed using the SRL-LE device.

Capital Safety has evaluated its SRD product options against the new requirements. SRD models that Capital Safety previously designated as "Leading Edge" models remain acceptable for all edge applications. Other SRDs that include separate "add on" energy absorbers attached to the harness or to the end of the SRD lifeline must be limited to applications where they are anchored overhead only and not exposed to sharp metal edges. Use of these products with "add on" energy absorbers is acceptable around wood, finished concrete with a rounded edge, non-metal roofing materials, or aerial lift applications where the railings or other exposed metal edges have a radius is 1/8 inch (3mm) or more.

Note: Lifeline contact with an edge can present a hazard to users of SRD's. Provide edge protection (example: padding on the edge) for the lifeline whenever possible.

Current leading edge rated models (SRL-LE) include: DBI-SALA Nano-Lok Edge models, Ultra-Lok 3504422 and 3504422C\* (15', 4.5m), 3504500 and 3504500C\* (30', 9m), 3504600 and 3504600C\* (55', 16.7m) and Protecta 3500540 and 3500541\* (20', 6m).

\* Canadian CSA standard compliant.





## First Man Up Kit

D. C. Taylor Co. developed a First Man Up process and according fall protection kit to accommodate an initial and immediate fall restraint anchor when accessing the roof. The creation of this process and kit reduces the time an employee is on a roof without an active form of fall protection while first accessing the roof during a reroofing or service project. The process provides that the installation of a personal fall arrest system will be the first procedure executed before material loading, setting up of warning lines, etc. The kit contains a body harness, vertical lifeline, roof anchor plate, rope grab, cordless screw gun, spec'd fasteners, and cross-arm strap. The kit is in addition to site specific fall protection plans and other fall protection equipment.

# Jobsite Safety Inspection Process

- D. C. Taylor Co. developed a process for completing a weekly Jobsite Safety Inspection (JSI) completed by a designated individual on each roofing crew. The employee is identified by the Project Supervisor to complete the JSI checklist in an effort to ensure compliant project conditions and activities, and results in improved safety knowledge by the roofing crew, improved project OSHA compliance, and reduced exposure to identified hazards

[illegible]

D.C. TAYLOR CO.		FALL PROTECTION		SANITATION	
YES	NO	YES	NO	YES	NO
Walking-working surfaces have the strength and structure integrity to support imposed safety equipment without excessive deflection or slippage		Adequate protection (net, climbing rope) supplied at all times		Adequate clean drinking water supplied at all times	
Walking surfaces are checked around all open edges of the roof each time		Use of a current climbing rope prohibited		Use of a current drinking water prohibited	
Walking lines are installed at least 8 ft from roof edge unless covered in 2 ft from eaves		Falls and live wires are fully insulated		Falls and live wires are fully insulated	
Roof access and walking paths are restricted to the work areas and walking paths are maintained in safe working condition		Walking facilities for employees exposed to harmful contaminants		Walking facilities for employees exposed to harmful contaminants	
Cables and ladders are secured with current fall arrest		PERSONAL PROTECTIVE EQUIPMENT		YES	NO
Cables and ladders are used for fall restraint only with no fall arresting function		PPE provided (adequate safety vest)			
PPE is in good condition and inspected prior to each use by competent person		PPE maintained in good condition			
Signage is at least 12 ft from edge, hole or opening		Eye protection worn as required			
Signage and equipment for fall arrest are present		Herd protection worn when handling horses, zebras, deer, wild and other large animals			
Guardrail is posted with at least 62" H		Safety harness worn as needed			
Harness, 10 ft and are properly maintained in good condition and inspected prior to each use		Fall protection used when required			
PPE is in good condition and inspected prior to each use		Respirators being worn if required, fit tested, and used as required based on exposure			
All electrical equipment tested at least 90 days prior to use with a pass by a qualified person		Hazardous waste when using water and soil			
Signage is posted, secured, and marked as required		Housekeeping		YES	NO
Provisioning work areas, lighting and other safety equipment as needed		Wastewater treatment equipment			
DECK REPLACEMENT		YES	NO		
100% of surfaces 100% of roof deck		Decking and combustible materials removed at regular intervals			
Walking lines are installed at least 12 ft from deck replacement line		Hot boiler, steam and machinery operated without adequate safety equipment			
Buddy system employed		Saw blades removed when not in operation			
Self-insulating PPE and being used		Low voltage/lighting measures in compliance to exist			
Safety Monitor under this replacement case made		About how far from the work area			
COMMENTS AND NOTES:					
CORRECTIVE ACTIONS:					
1.					
Corrective Action to be Completed by Date:					
2.					
Corrective Action to be Completed by Date:					
3.					
Corrective Action to be Completed by Date:					
4.					
Corrective Action to be Completed by Date:					

# 1. Lighting Updated to LEDs

- Replacing outside lighting from metal halide to LED in parking lot and around the building to:
  - Provide better pathway lighting to ensure safety and security for our employees/customers
  - Increase power efficiency of the lighting
  - Reduce environmental impact on longer life and efficiency

based



## 2. Near Miss Reporting

- Donaldson developed an improved process for Near Miss and Injury Incident Reporting
- All incident reports are share among the US plants
- All incident reports are put in a shared folder and database to track actions of all plants related to incident
- Conduct weekly conference calls among the US plants to discuss incidents and determine applicability to the other plants
- Plant presents all of it's incidents and applicable incidents from other plants in weekly start up meetings to raise employee awareness toward potential hazards



## 2. Near Miss Reporting Example

Date: 10/30/2015	<b>Near-Miss Report</b>	Location: Dixon Dept: 5033 Stores
------------------	-------------------------	--------------------------------------

**Near-Miss Description:**  
Forklift operator was maneuvering skid of media, the forks were placed on the right side of the skid. Due to not having the forks placed in a balanced center, the operator lost balance of the load causing it to fall and strike the pole pictured to the right.

The operator immediately reported the incident to supervision.

**Root/Contributing Cause(s):**

- Operator lost situational awareness
- Operator had the load unbalanced on forks
- Focused on one aspect of the task

**Corrective and Preventive Action(s):**

- Safety Alert presented to employees and other plants
- The area was made safe
  - Evaluated equipment on pole for integrity
- Counseled and retrained operator



- Pictured is an example of a Near Miss Report that is discussed on the weekly plant call, as well as with site employees to increase awareness

# Safe Roof Access



An assessment of the campus identified two locations where access was needed and would require bringing out an extension ladder and setting it up each time. Multiple benefits from the fixed ladders –

- Eliminate setup and possible strains that could occur when lifting into place or taking down
- Eliminate tip over, need to secure ladder, and requirement to have a person support the ladder until secure
- Cage offers protection while ascending/descending
- Design gives person a hand-hold when stepping onto the roof – less risk of fall vs. stepping off an extension ladder

During the same assessment another area on a rooftop required using bricks as a “step” or pulling yourself up. Installed a step system that allows easy ascent/decant.

# Engineering Control

## Hazard Description:

Occasionally on the Alfalfa Quick Stack palletizer a pallet would become crooked and the workers would need to straighten it so it can cycle to the top in preparation for stacking bags. This action would happen randomly and was not consistent as some would be straight and others would have to be manually straightened.

This would entice the worker to reach in and straighten the pallet by hand which could become a line of fire through the placement of the hands and the sidewalls of the equipment.

Through teamwork and ingenuity an engineering solution was created and implemented- eliminating the line of fire and human errors on hand placement. All the employees were trained on the new process.

New 2 handed control for the pallet positioner (red buttons). The yellow arrows are the original 2 handed controls for the top door.



A cylinder was added to the bottom of the palletizer platform and push button mechanism to eliminate the risk/ or opportunity to place body parts inside the platform. The cylinder pushes the pallet straight once the platform table is closed with out human contact.



# Engineering Control

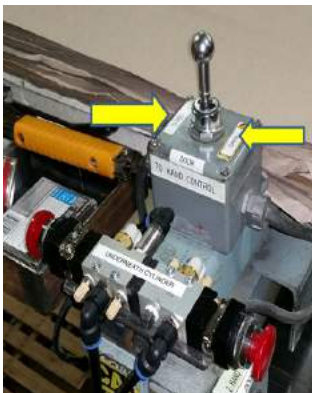
## Hazard Description:

Occasionally on the Alfalfa Quick Stack palletizer a pallet would become crooked and the workers would need to straighten it so it can cycle to the top in preparation for stacking bags. This action would happen randomly and was not consistent as some would be straight and others would have to be manually straightened.

This would entice the worker to reach in and straighten the pallet by hand which could become a line of fire through the placement of the hands and the sidewalls of the equipment.

Through teamwork and ingenuity an engineering solution was created and implemented- eliminating the line of fire and human errors on hand placement. All the employees were trained on the new process.

New 2 handed control for the pallet positioner (red buttons). The yellow arrows are the original 2 handed controls for the top door.



A cylinder was added to the bottom of the palletizer platform and push button mechanism to eliminate the risk/ or opportunity to place body parts inside the platform. The cylinder pushes the pallet straight once the platform table is closed with out human contact.



# Hazard Recognition Drive Incident Reduction at Pioneer Renwick Production Plant

## Problem (before improvement):

We had incurred property damage and near miss incidents that had a primary or secondary root cause of lack of hazard recognition

These incidents had the potential for serious injury to occur

## Improvement:

**Require Employees who are about to conduct any tasks that do not have standard work or work instructions to complete a safety task assignment (STA) document prior to conducting that task.**

- This ensures the employee has thought about the job and all applicable PPE, permits, tools & equipment as well as possible work hazard and hazards in the area.
- Employee must explain how the hazards have been eliminated, minimized or adequately controlled prior to doing the work
- Employee must also describe what they plan to do if an unexpected event occurs.
- Supervisor must sign off prior to the work being conducted ensuring proper review of the work being done otherwise work cannot be completed.

## Safety Task Assignment Form:

### Safety Task Assignment (STA)

Prior to the work being done, have the owner/supervisors of the systems approved the task to be conducted?

Supervisor's signature/s \_\_\_\_\_  
Date: \_\_\_\_\_ Time: \_\_\_\_\_

Emergency/Security Area Contact: PH/Fax: \_\_\_\_\_

Safe Area Location: \_\_\_\_\_

Contractor or Crew Safety Leader (CSL): \_\_\_\_\_

PH/Fax: \_\_\_\_\_

Number of Crew Members for task: \_\_\_\_\_

Job Description: \_\_\_\_\_

Permits & Disclosures:

o General Work Permit o Fire Watch o Excavation o Barricade

o MSD/SDS o Lockouts o Confined Space Permit

o Hot Work Permit o Structural Penetration Permit

o Other: \_\_\_\_\_

Will task create dust/fumes etc. that may cause systems to be activated (i.e. fire alarms etc.):

o Yes

o No

Work Hazards & Hazards in the Area:

o Welding & Burning o Grinding o System Under Pressure

o Rigging & Lifting o Electrical o Storm Sewers Protected

o Fall Hazards o Drilling o Electrically Classified

o Floor Openings o Noise o Corrosive Materials

o Temperature o Lead o Gas Cylinders

o Flammables o Asbestos o Ventilation

o Other: \_\_\_\_\_

Personal Protective Equipment:

o Hard Hat o Safety Glasses o Full Body Harness

o Safety Glasses o Tyres o Hearing Protection

o Full Face Shield o Gloves

o Respirator - If no, Type: \_\_\_\_\_

o Other: \_\_\_\_\_

Tools and Equipment:

o Hand Tools o GFCI o Electric Power Tools

o Step Ladder o Scaffold o Threading Equipment

o Extension Ladder o Crane o Pneumatic Tools

o Lift-Reach o Rigging o Powder Actuated Tools

o Fire Extinguisher o Welder o Oxygen Equipment

o Additional Tools: \_\_\_\_\_

### Safety Task Assignment (STA)

Does the work require a "competent person per OSHA?"

Competent Person:

Have the workers been included in creating this safety task assignment and do they possess the skills and training necessary to complete the work safely?  
How?

Have the workers been informed on the scope of the work, the hazards involved, and have they been given direction for work scope changes?

Have the hazards been eliminated, minimized or adequately controlled to protect the crew members from injury?  
How?

Have you planned for the unexpected, or taken into account the "What If?" scenarios?

Do all crew members know what to do in case of an emergency?

Where is the location of the nearest phone?

Other specific instructions:

Has MSD/SDS information been reviewed with the crew?

Where are MSD/SDS's kept?

Has the area been properly barricaded including signs to protect co-workers and others?

This STA is to be completed at the start of a new task by the crew and the crew's safety leader (CSL) or foreman prior to beginning work. If the scope of the work changes, or new make up changes, or previously unknown risks are discovered, a new STA shall be completed.

The STA is to remain in the possession of the CSL or foreman for the duration of the task. All STAs will be kept on site by the contractor for the duration of the project.

Additional information:

All incidents must be reported immediately. We are committed to care.  
Return completed STA to supervisor for post review then to safety to scan & file.

## Benefits:

- Increased safety!
- Renwick Production Plant has worked over 4 years with no recordables
- Incidents were reduced by 22% from 2014
- Incidents were reduced by 65% from 2013

# Paint Markers

The Shop has been using the following marker for several years. This is used in marking bolts after they have been torqued. Employees have had paint “flicked” in their face and Eye area while using the marker below. This marker is not ideal for this application.



# Paint Markers

During the past two weeks, I've had the employees use two different brands of paint markers. The initial marker was used as a control.

**Conclusion:** The following marker has proven to be more effective and “ User Friendly”. Employees are not having any “ Flick” back or leakage. This will eliminate possible eye injuries and irritants to the skin. This will become the only marker allowed to be used in the shop. I will also communicate these findings to our other Facilities.



# Safety Light

Although we have a very loud siren in our shop, we only have flashing lights at one end Of the building for 1 of 4 tracks. We were also using a spotter at each end of the track and In the middle. But, additional lights were needed. Circled below, are two light for one of The tracks. These lights are not very visible.





# Safety Light

Having lights permanently installed was going to be quite expensive and not in our budget for some time. **Solution:** Pictured below, are lights that were purchased and attached to a base. These are placed at each end and middle of the track that Locomotives are moving on. This was a very low-cost solution and the lights are more recognizable at the new Height. This will provide awareness to employees, visitors, and vendors.



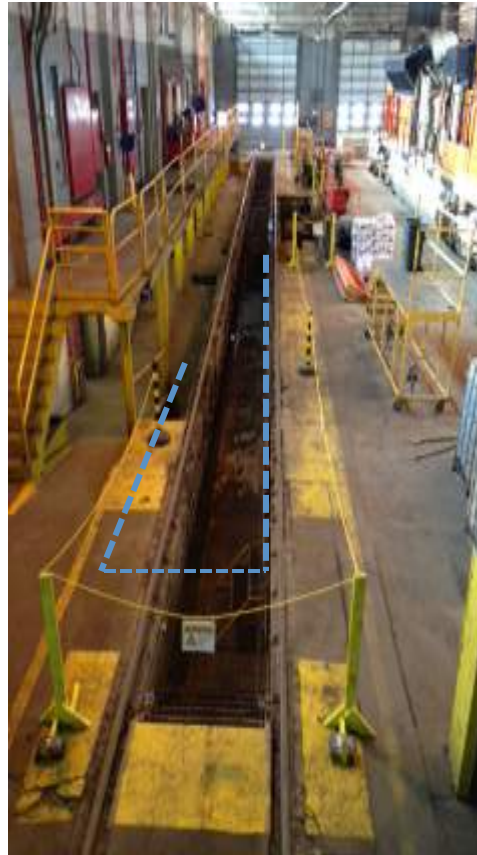
# Pit Barrier

We have 2 pits in our shop for the use of servicing the underside of Locomotives. When the Locomotives are moved off the pit, nets are put in place as a fall protection device. We are taking a pro-active approach and adding a visual barrier to the pits.



# Pit Barrier

After the locomotive has been moved from the pit, nets will be set in place along with Yellow barrier chain with signage around the outside perimeter of the pit. This will provide the visual needed to further protect our employees from a fall.



# Cylinder Storage

It was noticed that Oxygen and Propane cylinders were being stored together. This is a Violation of OSHA 29 CFR 1910.253(b)(4)(iii). *Oxygen cylinders in storage shall be separated From fuel-gas cylinders or combustibles , a minimum distance of 20 ft. or by a non-combustible barrier at least 5 feet high having a fire resistance rating of at least One-half hour.*

Propane  
Tanks



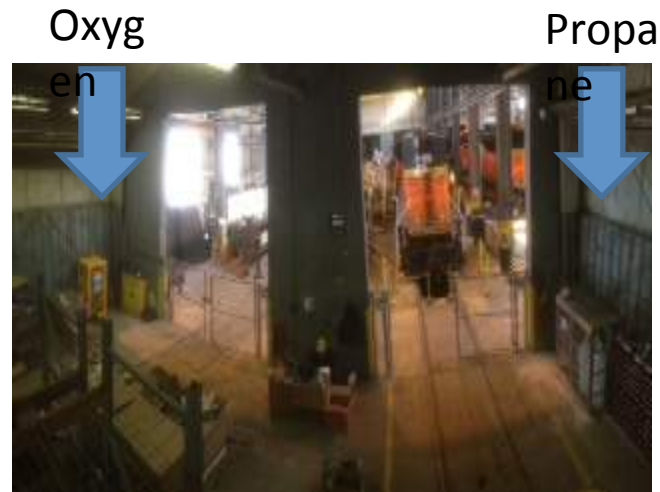
Oxygen  
Tanks





# Cylinder Storage

A new storage cage was purchased to store Oxygen and other bottled gasses. ( Argon, CO2, & Nitrogen). The Propane storage will only be used for Full and Empty Cylinders of Propane. The distance between the storage lockers is now 40 feet.



## Before



## After



ESCO Group implemented a new item to help prevent cuts when opening boxes and other miscellaneous items. To the left is a generic utility knife with a safety blade our employees would use to open boxes. To the right is an item named iSlice. The design of the iSlice is a ceramic blade that resists wear and never rusts; staying sharp. The iSlice is designed to not cut your hand or fingers.



ESCO Group has implemented a D-ring extension use program for full-body harnesses. Employees can use up to an 18" D-ring extension to help prevent shoulder injuries and to help give a visual conformation of connection between full-body harness and lanyard. To ensure our employees utilize the equipment correctly, we have allowed employees to only use self-retracting lifelines with the D-ring extension.

ESCO Group has implemented a program for employees to place pictures in their hard hats on 'Why do you work safely?' The program will reward employees a t-shirt if they participate because it is a great way to positively promote safety throughout our company.

## Before



## After





# Flint Hills Resources Algona Iowa

**FHR Identified a potential ergonomic injury risk when spouting tankers. The loading arms had several swivel joints with no heat which made maneuvering the spout difficult when material began to cool. At times this required the use of external heat or additional help from plant personnel.**

**Drop down Loading Arm with Internal heating**



**Swivel Joint Loading Arm with no heat and suspended counter**

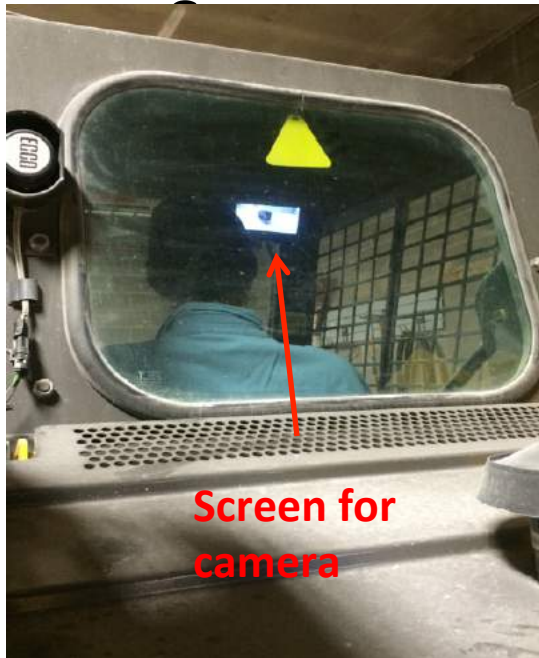


**As a pro-active measure the new loading spouts were engineered so that heat trace was internally installed eliminating any ergonomic risk. At the same time the suspended counter weights over the truck lanes were relocated to the base of the rack and shielded with PVC.**

# Flint Hills Resources Davenport Iowa

Skid steer loaders are one of the most helpful tools in many industries. However, because of their small size and versatility, skid steer loaders can be one of the most dangerous tools. Workers are injured every year by the unsafe operation of skid steers.

## Back Up Camera



Screen for  
camera

## Back Up Camera



Back up  
camera

The operators at Flint Hills Resources Davenport terminal identified a hazard of when operating their skid-steer it was difficult to see directly behind them. In effort to reduce this hazard they recently installed a back up camera to improve the safe operation of their skid-steer.

# Flint Hills Resources Dubuque Iowa

**A full 55-gallon steel drum can weigh over 2,000 pounds, with typical weights of 400 to 800 Lb. When being moved, the contents of your drum may shift inside, making the drum difficult to control or even dangerous. Mishandling a heavy drum can cause serious injury.**

**55 gallon drums weighing 400lb**



**Drum Barrel Handler**



**The employees at the Dubuque terminal mitigated the hazard of handling and transferring drum contents by utilizing a drum barrel handler.**

# Flint Hills Resources Dubuque Iowa

Applying energy control using tags, although compliant, has some limitations. Tags do not provide protection from being inadvertently re-energized like locks can.

## Energy Control Tag



## Energy Control Applied

Using Locks

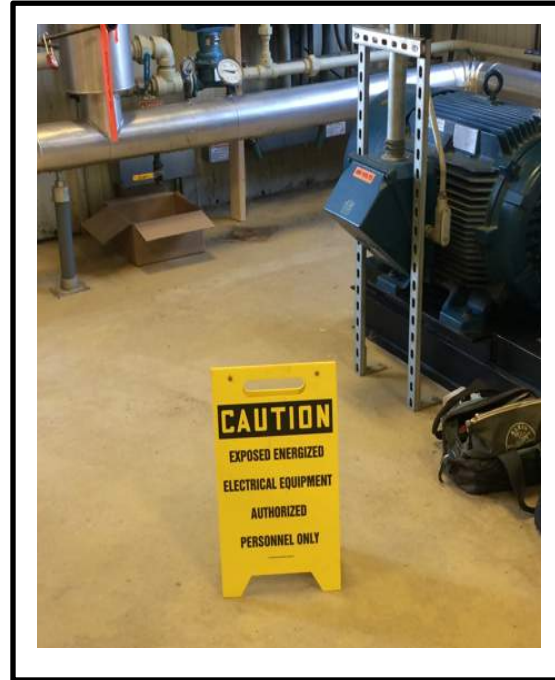


The operators at Flint Hills Resources Dubuque terminal identified an opportunity to use locks instead of tags when applying energy control to their control panels. This identification and mitigation of a hazard provided a greater level of safety at the Dubuque terminal.



# Flint Hills Resources Dubuque Iowa

Electric current tends to follow the path of least resistance. Electrical injuries happen when a worker comes into contact with a live wire. The body becomes part of the circuit. Workers need to be warned of any electrical hazard.



The operators at Flint Hills Resources Dubuque terminal have implemented a policy when any exposed electrical equipment is being worked on a sign will be posted to warn employees of the potential hazard.

# Vehicle Safety

## Before

The existing loading dock was constructed in the early 1980s when the standard semi trailer was 45-feet long. The dock was fully enclosed to provide protection from the elements to drivers, warehouse employees, and vehicles. In the years following, standard trailer length has grown to 53-feet. This left little room for trucks and trailers to safely back into the enclosed loading dock area.

## After

The location added several additional loading docks to accommodate the longer trailers and to improve vehicle and facility safety.



# Vehicle Safety

## Before

Manifold where the petroleum pipeline transfers into terminal storage system was exposed to vehicle traffic.

## After

Location installed vehicle impact barriers to prevent damage to the pipeline manifold and storage system.



# Inclement Weather Safety

## **Before**

Location employees are required to unload fertilizer rail cars year-round, regardless of all but the most extreme weather conditions.

## **After**

The location constructed a structure in an effort to protect employees from exposure to the elements and lengthen the service life of the equipment used in unloading rail cars.



# Slip, Trip, & Fall Safety

## Before

The location employees operate in limited space due to the fact that the shop is leased from a third-party. They require access to parts and equipment, but have no ability to expand their operation.

## After

The location installed racking systems to store tools and equipment. This has greatly reduced the likelihood of a slip, trip, or fall incident and has also increased the amount of working space available to the employees.



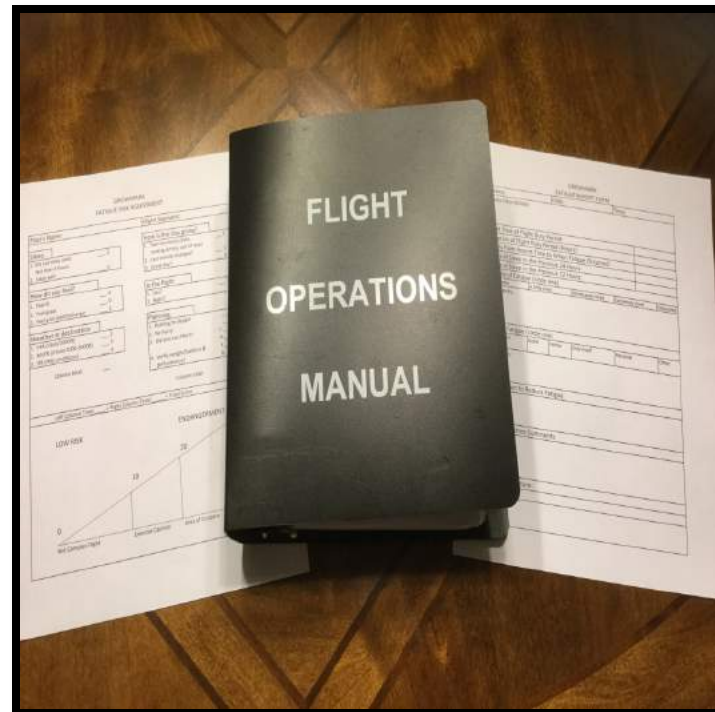
# Flight Crew Fatigue Safety

## Before

Pilots followed the FAA regulations governing individual flight time per day/week. These policies did not address other fatigue situations relating to illness, etc.

## After

The location implemented a Fatigue Reporting System that allows flight employees to formally declare themselves fatigued. Additionally, a Fatigue Management Program was implemented for flight & maintenance personnel to review the causes of fatigue and implement procedures to prevent recurrences in the future.



# Slip, Trip, & Fall Safety

## Before

Drivers loading refined fuels had to walk across unpaved parts of the property to receive their Bills of Lading.

## After

Location installed a paved walkway that can be maintained during inclement weather. This improves safety for both transport drivers and location employees.



# Fall Protection Safety

## Before

Location employees were required to erect temporary scaffolding to perform maintenance activities in certain areas of the fertilizer terminal.

## After

Recognizing that the use of scaffolding posed certain risks to employees, the location purchased a motorized lift for use in performing these tasks. Additionally, the location implemented a regular training schedule to cover the safe use of the lift.





# Electrical Safety

## Before

Drivers loading refined fuels at the terminals are required to attach grounding cables to their vehicles to decrease the risk of fire due to static electricity.

## After

Location determined that an updated electrical grounding system was needed to better ensure the safety of location personnel and transport drivers.



# Slip, Trip, & Fall Safety

## Before

The fertilizer rail receiving pit was covered with open grating. A hazard assessment determined that there was a significant hazard to pedestrian traffic. Additionally, the pit was subject to accumulations of rainwater.

## After

Location employees fabricated a removable cover for the rail dump and also installed caution signs and security chains to eliminate pedestrian traffic from crossing the dump pit.



# Electrical Safety

## Before

Location employees were required to wade into the loading area and insert a portable electric sump pump to remove rainwater from the outside loading containment pad. Following a hazard assessment, the location installed a drain pipe and manual valve that allows the rainwater to be removed (after checking for sheen) without employees being exposed to electrical shock.

## After

Following a hazard assessment, the location installed a drain pipe and manual valve that allows the rainwater to be removed (after checking for sheen) without employees being exposed to electrical shock.



# Hancock County Health System's Walk Safe Campaign

Hazard: Snow and icy walkways causing slips and falls in our parking lots during winter.

Implementation:

- A "Walk Safe" Kick-off Campaign was offered to all staff with snacks while our employee committee talked about what we were implementing.
- We offered Action Traction Ice Cleats at a discounted cost of \$5.00.
- We educated staff what path to use to enter the building. See map below.
- We painted the walkways where employees were to walk.
- We provided shovels and ice melt at all entrances for employees to use if needed.
- Weekly Safety Posters were sent out to be discussed at daily huddles. See below.

Outcomes:

- We reduced our falls from 2-3 annually to 1 fall this year that was injury free.
- Employees felt empowered and took responsibility to help keep the walkways clear.
- We hired snow removal at one of our clinics that we found out didn't have a snow removal plan.
- The biggest win was employees saw maintenance staff as part of the solution instead of the problem and getting blamed for icy parking lots.





# Heska Corporation

## Before

- Parking Lot –

Our employee parking lot and drive was approximately 30 years old. Weather conditions through the years caused the lot/drive to be in disrepair as well as created pot holes, tripping hazards, uneven walking surfaces, hard to see parking lines and very difficult to clean in the winter.

## After

- In September 2015, we contracted with an asphalt company to resurface approximately 11,270 yards of Class A state hot mix asphalt. We also feathered a door to make it handicap accessible. In addition, new parking space lines were painted. We believe by doing this we eliminated the hazards associated with the old parking lot for both employees and visitors.