

# ***Grain Operations Webinar Series***





# ***Webinar 3***

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## **Getting Home Safely**

**Lecturer:**

**Jim Voigt, President, JFV Solutions Inc**



# ***Outline – Webinar 3***

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- 1. Why Safety?**
- 2. Safety Topics**
- 3. Personal Protection Equipment**
- 4. Record requirement**
- 5. Behavioral Safety**
- 6. Safety Resources**
- 7. Summary**

# ***Safety Principles***

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- **Every employee goes home safely every day - free of injuries and exposure related hazards.**
- **All accidents are avoidable!**
- **Safe behavior does not happen naturally, it must be learned and developed.**

# ***Safety Principles – cont.***

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- **Employers have a legal and moral obligation to employees.**
- **An effective safety program saves money.**
- **It is the right thing to do.**



# ***Personal areas to protect***

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- **Head**
- **Eyes**
- **Ears**
- **Lungs**
- **Hands**
- **Feet**
- **Skin**
- **Body**



# ***Other areas for safety consideration***

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- **Equipment and machinery**
- **Buildings and structures**
- **Vehicles and other transportation units**
- **Utilities**
- **Environmental concerns**
- **Neighborhood**



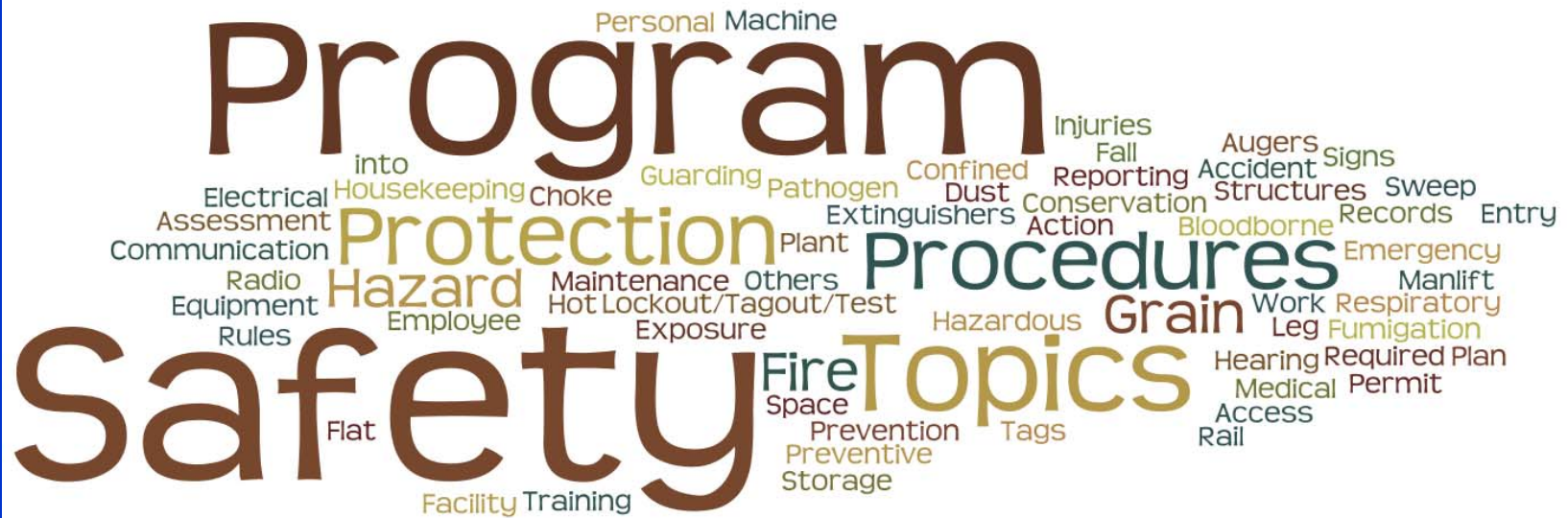
# ***30 Plus Safety Topics***

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- **The following topics typically require programs, procedures or training in grain handling facilities.**
- **Actual legal requirement may vary depending on country of origin.**
- **Company programs may vary due to emphasis and goals.**
- **Recordkeeping requirements essential to the programs.**



# Safety Topics





# ***Let's take a closer look at -***

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- **Emergency action plans**
- **Fire and dust explosions procedures**
- **Lock-out/tag-out (Loto)**
- **Bin entry procedures**
- **Fall protection**
- **Machine guarding**
- **Housekeeping**
- **Personal protective equipment**

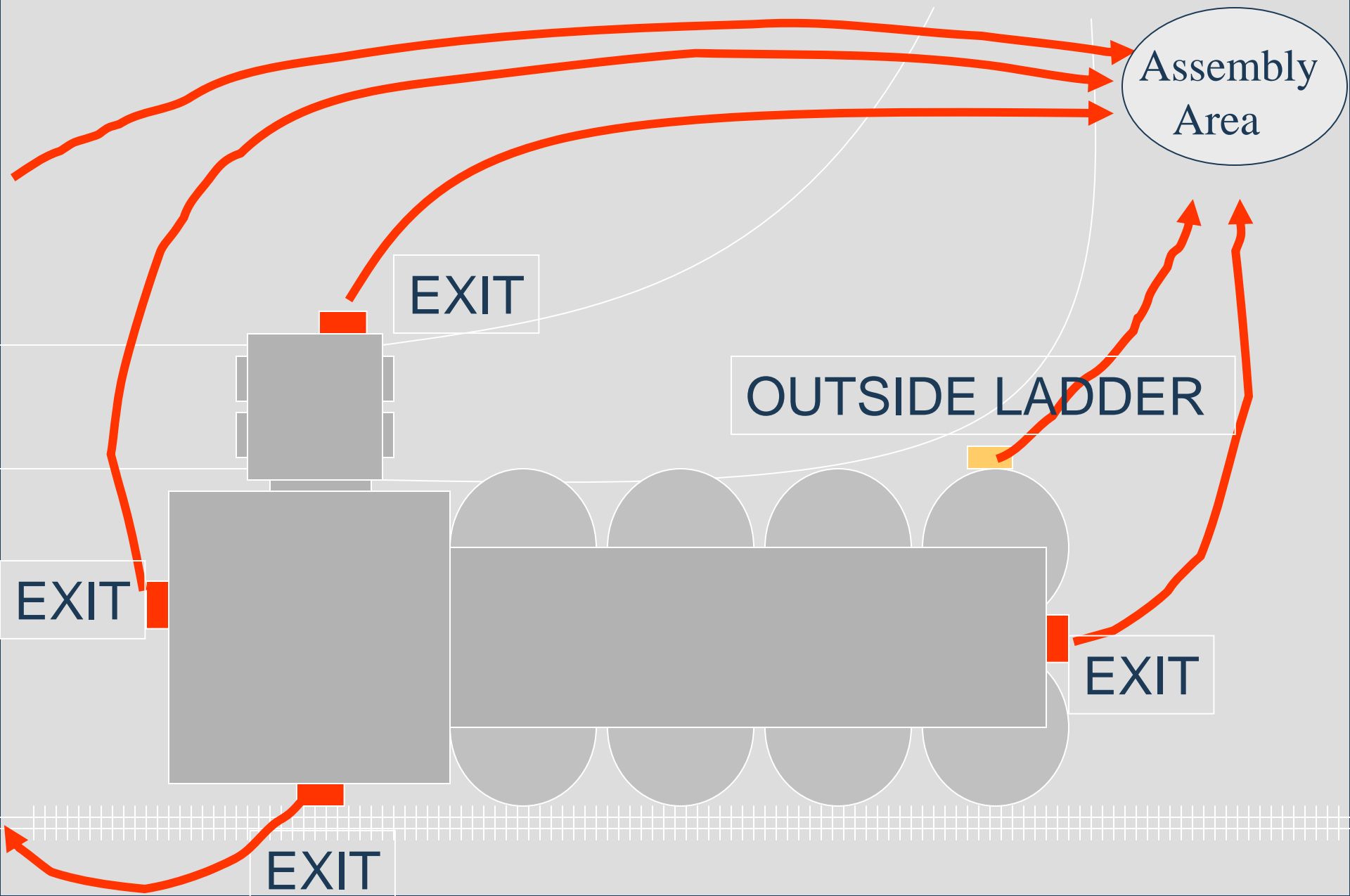
# ***Emergency Action Plans***

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- **Provides a pre-planned defined response to all potential disasters.**
- **Maybe a legal requirement depending on country of operation**
- **Requires repetitive training**
- **Requires updating as new hazards are introduced**

# Exit Routes

## More than just a map



# ***Emergency action plans***

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## **Recommended components in written plan**

- **Fires and explosions**
- **Serious injury**
- **Chemical spills and release**
- **Power failures**
- **Natural disasters**
- **Bomb threats/ terrorism**

# ***Emergency action plans***

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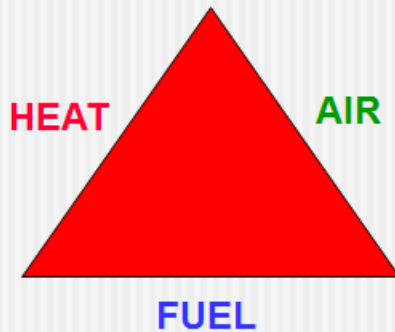
- **Addresses**
  - **Fire and explosion prevention**
  - **Fire and explosion response**
  - **Alarms**
  - **Head count**
  - **Evacuation point**
  - **Training**
  - **Communications – internal/external**
  - **Review process**

# *Fire and dust explosions*



# Fire and dust explosions

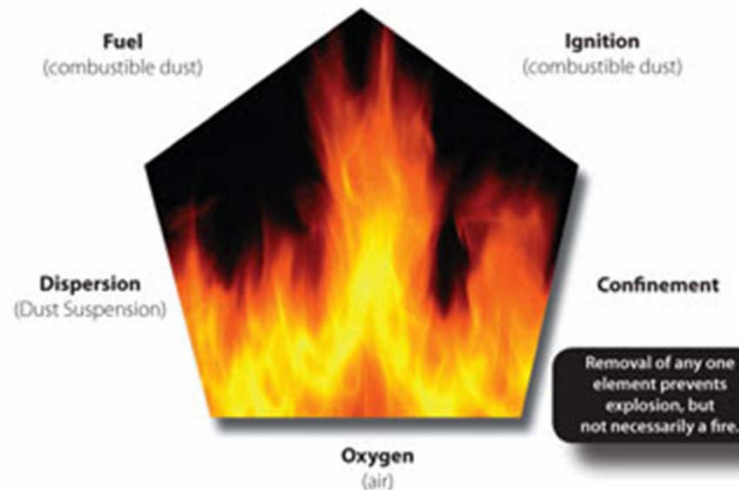
The Fire Triangle



Prevention

## Venting and suppression

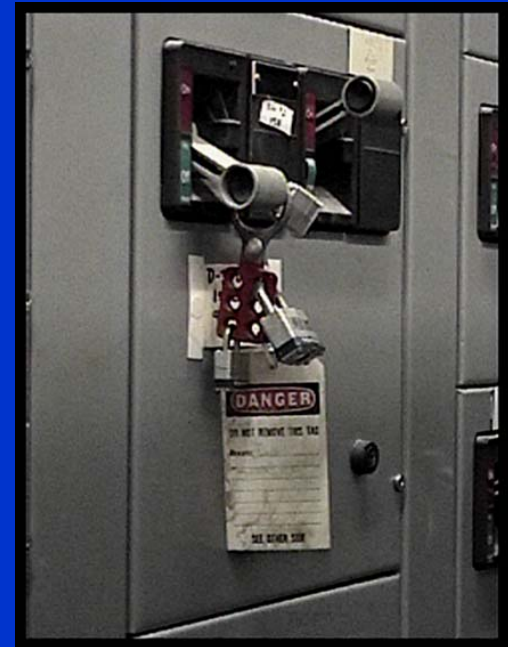
Dust Explosion Pentagon





# *Lock-out / tag-out (Loto)*

- **Assess hazards**
- **Select appropriate equipment**
- **Train**
- **Verify compliance**
- **Maintain**



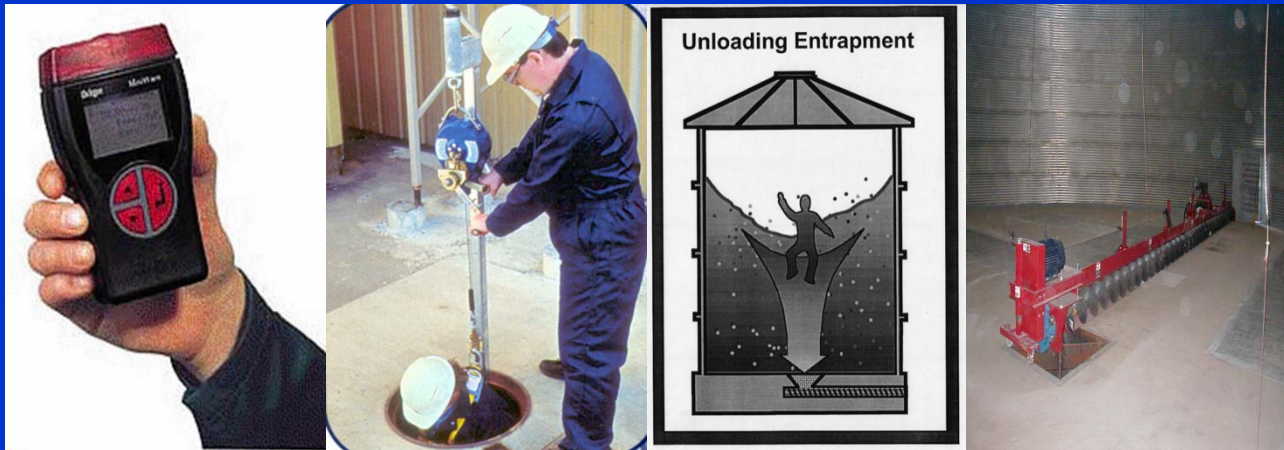
# ***Lock-out / tag-out (Loto)***

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- **Lock it out**
- **Put a tag on it**
- **Then test it to verify it is locked out**
- **Never share keys**
- **Follow procedures**

# ***Bin entry***

**ALWAYS inspect before entry**



**ALWAYS follow bin entry procedures**



# ***Bin entry***

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- **Confined space**
- **Engulfment**
- **Bridging**
- **Atmospheric**
- **Discharge**
- **Sweep augers**

# ***Grain Entrapment Prevention***

## **Best Management Practices**

**STOP!**

1. Stay out if possible
2. Never enter alone
3. Never enter untrained
4. Follow entry permit
5. Shut down/lockout
6. Secure lifeline
7. Emergency preparedness

For more information go to ...

[www.grainentrapmentprevention.com](http://www.grainentrapmentprevention.com)



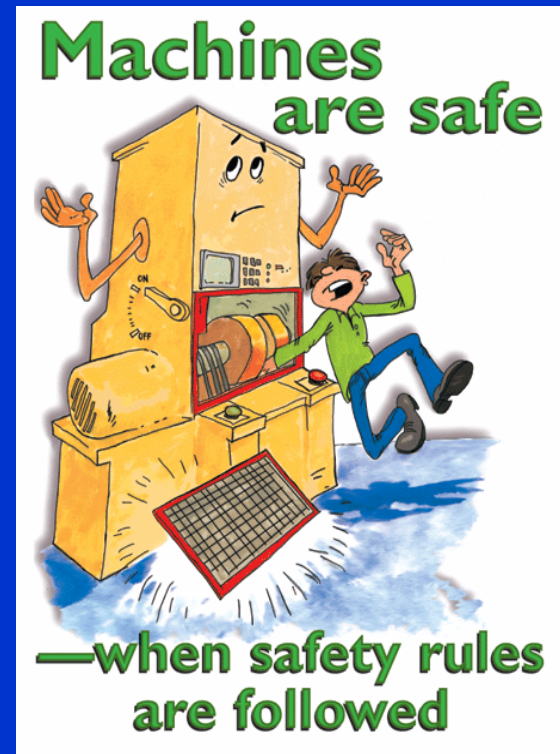
# ***Fall Protection***

- **Assess the hazards**
- **Verify design and engineering requirements**
- **Inspect and maintain**
- **Training**



# *Machine Guarding*

- Survey equipment for hazards
- Install machine guarding where needed
- Training



# ***Machine Guarding***



**Never operate  
a machine or  
Equipment without  
the guard in place!**





# ***Housekeeping Programs***

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- **Easy to implement**
- **Highly effective**
- **Satisfies many compliance issues**
- **Improves morale**
- **Improves productivity**
- **Eliminates many hazards**

# Personal Protective Equipment (PPE)

- Assess hazards
- Select appropriate PPE
- Fit test
- Train in use
- Maintain
- Replace



# ***Safety Records***

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- **Hours worked safely**
- **Incident rates for injuries**
- **Incident rates for lost time**
- **Workers compensation cost**
- **Near Misses**
- **Fatalities**
- **Audits and inspections**
- **Regulatory compliance**



# ***Behavior based safety***

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**Defined - behavior-based safety is applying behavior analysis to observable and measurable actions that are critical to safety performance in a particular process or organization.**

# ***Behavior based safety***

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**Behavioral safety has four linked, key activities:**

- Identify behaviors that are critical to on-the-job excellence.**
- Gather ongoing data on workgroup performance of those site-specific behaviors.**

# ***Behavior based safety***

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**Behavioral safety has four linked, key activities (continued):**

- Provide regular, two-way feedback on workgroup performance of the identified critical behaviors.**
- Identify and remove behaviors to continuous performance improvement**

# ***Behavior based safety***

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- **To be successful a BBS program must include all employees, from the CEO to the floor associates**
- **Define a behavioral best practice based on safety observations and assessment**
- **Fix the problem, do not place blame**

# ***Safety Resources***

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- **Federal and state governments**
- **Trade associations**
- **Professional societies**
- **Industry contacts**
- **Academic centers**
- **Consultants**
- **Internet**



# ***Summary – Webinar 3 Safety Programs***

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- **Top management support and prioritized**
- **All employees empowered and engaged**
- **Use of observation and assessment**
- **Train, train, train, train**
- **Acknowledge success**



# ***Webinar 3***

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## **Questions?**

***E-mail us at:***

**[jfvvsolutions@hotmail.com](mailto:jfvvsolutions@hotmail.com)**

# GEAPS 500

## *'Introduction to Grain Operations'*

Course Lectures: J. Voigt presenting those in yellow

1. **Introduction to Grain Operations**
2. Grain Receiving and Inbound Operation Procedures
3. Grain Sampling and Testing Operations and Procedures
4. **Binning Procedures**
5. Fundamentals of Grain Storage
6. Fumigation
7. **Grain Shipping**
8. Housekeeping and Grain Explosion Prevention
9. Maintenance and Recordkeeping programs
10. **Facility Safety**

# ***Disclaimer***

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- **This lesson is intended for a global audience that works in a variety of different styles of facilities as well as economic and governmental conditions. The content of this lesson is for informational purposes and to be used as it applies to your specific situation.**
- **The content of this lesson is not to take precedent over your current plant and /or company policies and programs, nor any governmental regulations.**
- **The photos used in this lesson were for illustration of the topic and are not to be taken as a recommendation for any design or equipment depicted in them.**