

# Safety at Material Recovery Facilities – It's a Challenge

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NERC Fall Conference  
November 1, 2016  
Portsmouth, New Hampshire



Institute of  
Scrap Recycling  
Industries, Inc.

## ISRI: Voice of the Recycling Industry



**1,300+**  
Member  
companies

**4,000+**  
Recycling  
facilities  
worldwide

**34**  
Countrie  
s

 **OSHA**<sup>®</sup>

IT'S NOT A TOWN IN WISCONSIN !

# Jurisdiction

OSHA approves and monitors all State Plans and provides as much as fifty percent of the funding for each program.

The following 22 states or territories have OSHA-approved State Plans that cover both private and public sector workers:

Alaska	New Mexico
Arizona	North Carolina
California	Oregon
Hawaii	Puerto Rico
Indiana	South Carolina
Iowa	Tennessee
Kentucky	Utah
Maryland	Vermont
Michigan	Virginia
Minnesota	Washington
Nevada	Wyoming

## From Section 5(a)(1) of the OSH Act:

- Everyone / employee(s) has the right to a safe and healthful workplace
- Everyone / employee(s) has the right to know about the substances in the workplace.
- Everyone / employee(s) has the right to information about injuries and illnesses in your workplace
- Everyone / employee(s) has the right to file a complaint with OSHA

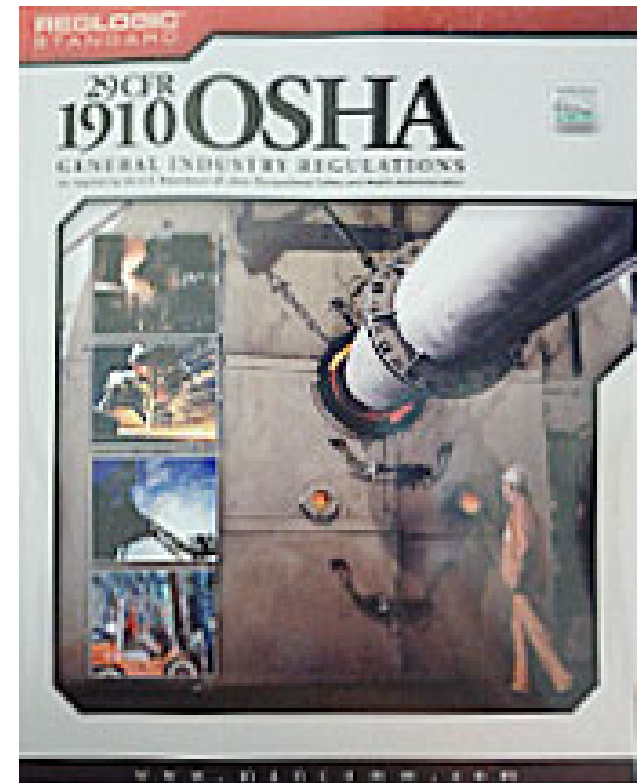
# Employee Responsibilities

## Employees-

- Need to report their injuries
- Wear the PPE as appropriate
- Follow the safety rules and procedures
- Report unsafe conditions or concerns

# Regulations

Safety practices at Material Recovery Facilities are currently regulated by the Occupational Safety and Health Administration (OSHA) under the Code of Federal Regulations 29 CFR 19102 for general industry.



# The Rules



# OSHA Industry Standards

- All employers must comply with OSHA's requirements for exit routes in the workplace
- The OSHA standards for walking and working surfaces apply to all permanent places of employment (except agriculture and mining)
- Employers whose employees are exposed to excessive noise (e.g., conditions that make normal conversation difficult) may be required to implement a Hearing Conservation program

# But wait there's more...

- If your employees service or maintain machines or equipment that could start up unexpectedly or release hazardous energy, you may be subject to OSHA's Lockout/Tagout requirements.
- OSHA's electrical standards include design requirements for electrical systems and safety-related work practices.
- Employers must perform an assessment of each operation in their workplace to determine if their employees are required to wear personal protective equipment (PPE).

# And still more ...

- Employers should evaluate their workplaces for the presence of confined spaces.
- If employees may be exposed to blood or bodily fluids as part of their assigned duties, you may be subject to OSHA's Bloodborne Pathogens standard.
- If your employees operate Powered Industrial Trucks (i.e., forklifts), you may be subject to OSHA's Powered Industrial Trucks standard.
- **This list is not comprehensive – additional OSHA standards may apply to your workplace. Review OSHA's general industry standards (29 CFR 1910) for other requirements.**

# Get some technical help



# Use OSHA Tools

Find OSHA's standards.

Find OSHA's standard interpretation letters.

Use the OSHA Compliance Assistance "Quick Start" tool.

Contact your local OSHA Compliance Assistance Specialist.

Request a FREE copy of the "OSHA Job Safety and Health: It's the law" poster.

<https://www.osha.gov/employers/index.html>

- The American National Standards Institute (ANSI) Z2453 document is independent of OSHA 29 CFR 1910
- Provides detailed information and voluntary standards regarding safety practices at MRFs
- ANSI documents, while voluntary, are typically used for interpretation by both OSHA inspectors and by the legal profession in the settlement of cases.
- ANSI is recognized as a major source of National Consensus Industrial Standards. Additionally, ANSI standards are frequently cited in the OSHA regulations, and thus become part of the National Standard for which industry must comply.

# Examples

## Z245.41 - 2008

Establishes safety requirements for the design, manufacture, construction, modification, maintenance and operation of facilities used in the processing of commingled wastes and recyclable materials

## Z245.51-2013

This standard establishes requirements to minimize the risk of fire, electrical shock and injury to persons during operation and maintenance of baling equipment for use with wastes and recyclable materials by commercial businesses, apartment buildings, industrial plants, waste processing facilities, waste disposal and **transfer industries, and recycling facilities.**

# What Are We Really Talking About ?



# Worksite Analysis and Hazard Recognition

- Evaluate all workplace activities and processes for hazards.
- Reevaluate workplace activities when there are changes in:
  - Processes
  - Materials
  - Machinery
- Conduct on-site inspections, identify hazards and take corrective actions.
- Provide a hazard reporting system for employees to report unsafe and unhealthful conditions.
- Investigate all accidents and near misses to determine their root causes.

**A hazard is the  
potential for harm.**

# Words to Remember...

Environment

Exposure

Consequence

Trigger

## Good hazard scenarios describe:

- Where it is happening (environmental)
- Who or what it is happening to (exposure)
- What precipitates the hazard (trigger)
- What is the outcome that would occur should it happen (consequence)
- Any other contributing factors

# Typical Hazards/Incidents

- Struck by moving vehicles such as forklifts, bucket loaders and trucks
- Caught or crushed in balers and other heavy machinery during maintenance or while attempting to clear jams
- Crushed by falling bales and buried under tons of materials

# A Hazard Scenario

environment

exposure

In the **maintenance shop**, while clearing **a snag**, a **worker's hand** comes into contact with a rotating pulley. It pulls his hand into the machine and **severs his fingers** quickly

trigger

consequences

*Direct costs are just the tip of the iceberg*

### Direct Costs

- Medical payments
- Compensation

Insurance pays most of these

### Indirect or Hidden Costs: Uninsured and Paid Out-of-pocket

- Lost time by injured worker
- Lost time by fellow employees
- Supervisor's time to investigate
- Training a substitute worker
- Poor efficiency due to break-up of crew
- Hiring costs
- Overtime to make up production
- Failure to meet deadline/fill orders
- Damage to tools and equipment
- Damage from accident: fire, water, chemicals, explosives, etc.
- Loss of good will
- Loss of production
- Overhead costs while work disrupted
- Downtime

You pay **all** of these

*Seeing the hazards  
for what they are*

## Land mines with Hidden Costs

### Direct Costs

- Medical
- WC costs

### Indirect Costs

- Time, Time, Time!!!  
(investigation, production, recovery, etc.)
- Equipment damage/downtime
- Training new people

# Hazard Identification

Ask these 5 questions:

1. What can go wrong?
2. What are the consequences?
3. How could it arise?
4. What are other contributing factors?
5. How likely is it that the hazard will occur?



# Job Hazard Analysis

## Effective Step-by-Step Process

<https://www.osha.gov/Publications/osha3071.pdf>



# Parting Words

There is a big difference  
between having a safe work place and telling  
someone to work safely.

Thank you for your attention!!!

Questions?????