

Can We Improve Safety by Looking at Other Industries?

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Introduction

- Debra Frye, PE, LEED AP
- HDR, BNSF, UPRR, Contractors Safety Training
- Solid Waste Technical Director
- Plan & Design Transfer Stations, MRF's and Railroad Facilities

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Safety Briefing

- Nearest Exit & Rally Point
- Who is CPR Certified?
- Who will call 911?
- Emergency kit?
- Anyone see dangers/hazards?



U.S. Government releases troubling data identifying solid waste and recycling collectors as nation's 4th most dangerous profession

WASHINGTON, D.C. - The National Solid Wastes Management Association (NSWMA) is troubled by statistics released by the U.S. Bureau of Labor Statistics (BLS) in a report earlier today. In the report (Census of Fatal Occupational Injuries Summary, 2011), BLS states that 34 waste and recycling collectors died on the job in 2011, a 31 percent increase from the number of fatalities reported by BLS in 2010. The BLS report states that refuse and recyclable material collectors had a fatal injury rate of 41.2 per 100,000 full-time equivalent workers in 2011, compared to a rate of 29.8 per 100,000 in 2010. The BLS now ranks solid waste and recycling collection as the 4th most dangerous profession in the United States, up from 2010's No. 7 ranking.

Solid Waste & Recycling Collectors

Ranking in Most Dangerous Professions

- 2008 – Ranked 5th
- 2009 – Ranked 7th
- 2010 – Ranked 7th
- 2011 – Ranked 4th
- 2012 – Ranked 6th
- 2013 – Ranked 5th

Bureau of Labor Statistics Occupations with high fatal work injury rates

Google Search

About 2,360,000 results (0.52 seconds)


Transfer Station Accident Claims Life Of Longtime Local City ...

www.kwtx.com/.../Transfer-Station-Accident-Claims-Life-Of-...  KWTV TV ▾

Mar 25, 2015 - An accident at a solid waste transfer station has claimed life of a longtime local city worker. 



Danbury transfer station worker killed in garbage truck ...

www.newstimes.com/.../Danbury-transfer-station-work...  The News Times ▾

May 13, 2015 - Danbury transfer station worker killed in garbage truck accident A transfer station employee was killed at work Wednesday morning after he ... 

Safety issue was raised before fatal accident at Cape ...

www.pressherald.com/.../safety-issue-had-been-raised...  Portland Press Herald ▾

Nov 28, 2014 - Safety issue was raised before fatal accident at transfer station. Councilors were planning a 2015 review of the facility where ...  

Fatal accident prompts changes to transfer station

www.wcsh6.com/story/...accident-transfer-station/21156523/  WCSH ▾

Jan 1, 2015 - A fatal car accident prompts traffic changes through the Elizabeth transfer station. 

How?

- Employee crushed in baler
- Employee dies in accident at transfer station
- City work killed by garbage truck
- Employee partially run over and killed at Material Recovery Facility
- *Garbage truck slams into home, building condemned*
- *Six Killed as Garbage Truck Hits Crowded Sidewalk*
- *Trash truck fatally strikes pedestrian*
- *Woman hit by garbage truck*

Goes Beyond our Employees...

Garbage trucks kill more pedestrians and cyclists per 100 million miles driven than almost any other vehicle

Garbage trucks:

- do not travel long distances,
- spend majority of time in neighborhoods,
- risk ratio increased in highly populated areas

What are Others Doing?



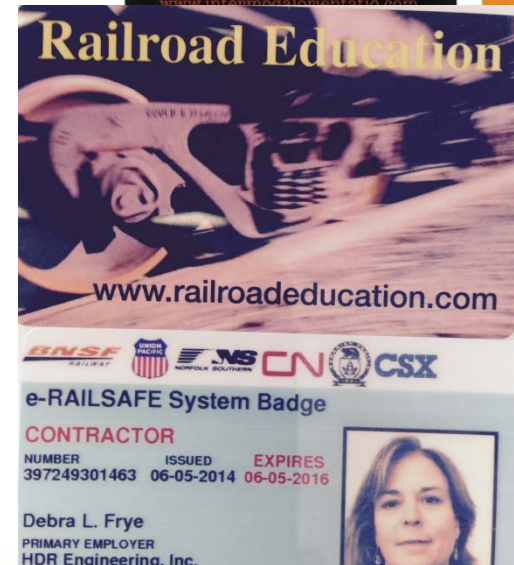
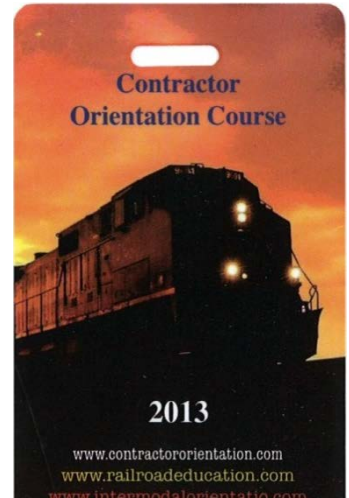
Railroads

- Train accidents per million train-miles down 80% since 1980 and 45% since 2000
- Railroad Grade Crossing collisions down 78% since 1980 and 35% since 2000
- Employee injury rate down 84% since 1980 and 47% since 2000



What has Railroad Industry Done?

- Change in Culture
- Training for employees & contractors
- Safety briefings daily & when conditions change
- You can stop work if see unsafe conditions
- You are responsible for Your safety!



Training

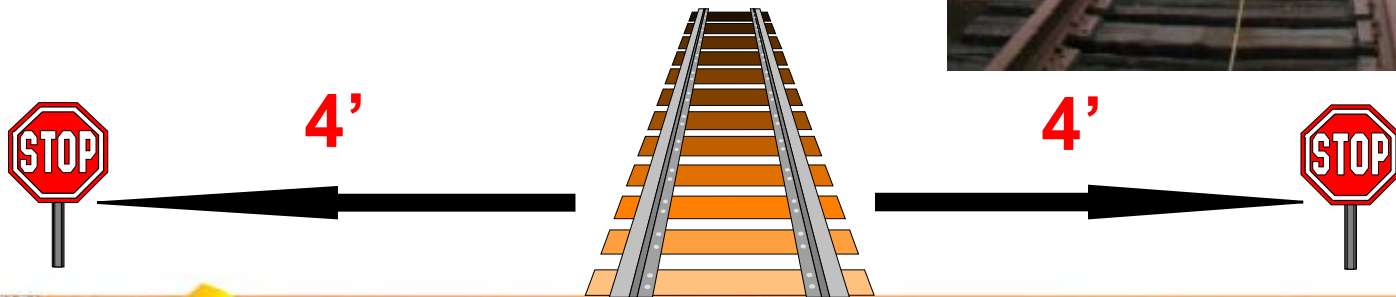
- Contractors – anyone working on RR Property (within 25 feet of track!)
- Different levels of Training (Railroad Orientation, Roadway Worker Protection)
- Railroad Specific Contractor Orientation
 - UPRR
 - BNSF
 - CSX
 - Amtrak
- E-Rail Safe required for all Railroads (security since 9-11)

What is "Fouling" a Track?

- People or equipment close enough to track to be struck by a train or on-track equipment.

- **Usually within 4 feet of the rail.**

- Roadway Worker Protection
- Requires RR Supervision (EIC)



The Employee In Charge (EIC): Requirements

1. Responsible for the On-Track Safety of others
2. Qualified in RR's On-Track Safety (OTS) program
3. Qualified in area working
4. Physically present during fouling work operations



Job Safety Briefings

- Work plan & hazards
- Define work assignments
- Check understanding
- Do not enter the safety zone around equipment & tool operations w/o communicating with the operator
- A new briefing to address changes
 - personnel, weather, assignments, equipment

Personal Protective Equipment

- Wear a hard hat at all times
- Wear safety shoes at all times
- Wear safety vest at all times
- Wear eye protection at all times
- Hearing Protection



RRs' Require Fall Protection from Bridges

- Have measures in place to guard against falls
- **Inspect fall arrest equipment prior to each use**
- Plans for prompt rescue
- Remove all fall arrest equipment from service after any fall

Fall Protection – Buildings, Equipment?

- Specifications for new equipment
- Tie off locations or rails
- Walkways with railing
- Tunnels – cover or handrails



Confined Space Safety

OSHA **1)** being large enough for an employee to enter and perform work; **2)** has limited or restricted means for entry or exit; and **3)** is not designed for continuous occupancy.

a *permit required* confined space will contain all of the above, **plus** one or more of the following:

- a substance that has the ability to engulf or asphyxiate the entrant
- a potentially hazardous atmosphere
- inwardly converging walls within the space or a floor the slopes downward, tapering to a small cross-section
- contains any other serious safety or health hazard

Confined Space/Equipment

- Compactors - June 15, 2015, Worker crushed to death in cardboard compactor
- Baler – September 2014, Worker killed in scrap metal baler when re-energized while working on it
- Shredder – July 7, 2015, Mid UK Recycling criticized over safety after shredder death
- Manholes – October, 2011, Two brothers died when entering an underground storm drain
- Cranes – July 20, 2015, Man's head trauma death at waste recycling plant
- Loaders – June 17, 2015, Man killed in Massive Crush accident at Rock Recycling Business

Alarms

Do you respond to the audible (beep-beep-beep) and visual (flashing lights) back-up alarms?

Or ignore ...



What's a Safe Distance to a Garbage Truck?

A garbage trucks weigh 25 tons on average

Take 3Xs longer to stop passenger cars



Eye Contact

Safe distance (15 feet) between you and a garbage truck.

A garbage truck has tires as tall as the average 5-year-old, and has no windows in the back

Making frequent stops and often backing up, eye contact is maintained!

REMEMBER—if you can't see the driver, the driver can't see you.

Multiple Main Tracks

Many injuries & fatalities occur in areas with more than one track in close proximity.

- People clear one track and are struck by a train on adjacent track.
- People fail to look in both directions.
- Clearance between trains can be extremely close.



Standing Equipment

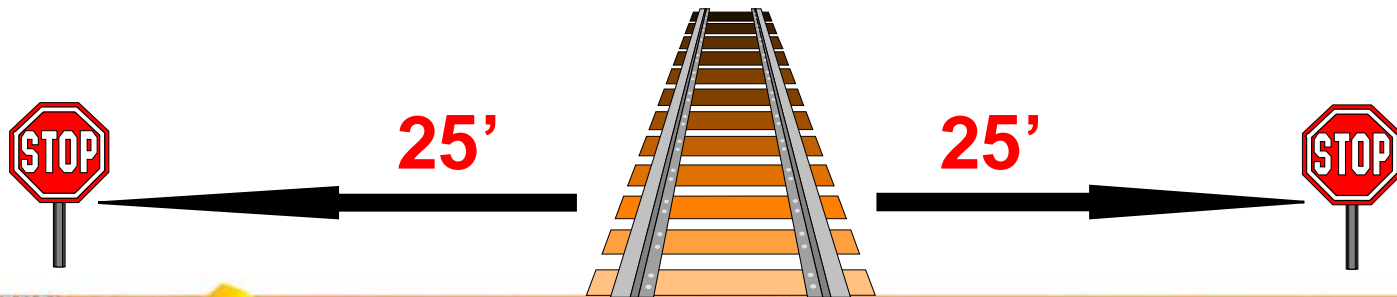
- Do not occupy, take refuge under, or cross between coupled rail cars or equipment.
 - Entering railroad property without permission is trespassing.
 - Insecure loads on cars can shift without warning.
 - **Rail Cars at rest can move suddenly & without warning.**

Railroad Right Of Way Is Private Property!

- **Entering the railroad right of way**
 - (usually within 25' of track)
- **without the permission of the railroad**
 - **is unacceptable!**

1. It is trespassing!

2. It is dangerous!



Public Access

- Separate traffic & Unloading areas than commercial
- Roads
- Signage
- Security
- Slip, trip and fall hazards



Transfer Station, MRF, Landfill

- Can equipment move without warning?
- Do you have safe areas
- How are vehicles & equipment restricted from safe area?
- Is your facility secure after hours?
- Materials stacked safely?
- Hazards in materials?

Facility Improvements

- Designate or design safe areas
- Equipment upgrades
 - Cameras, mirrors
- Update facility
 - Lighting – Daylighting!!
 - adequate space
 - Traffic controls
 - Traffic separation
 - Signage

Operating Practices

- Use RR crossings if you don't have RR permission
- Do not move toward an approaching train
- Do not cross in front of moving equipment
- **Do not ride railroad equipment**
- Remain 25 feet from switches
- Remain 25 feet from end of standing equipment



Safe Operating Practices for Waste Industry?

- Training
- Personal Protective Equipment
- Operations
- Facility design
- Users – training or awareness
- Pedestrians

Golden Rule of Railroading

**Always expect a train to move
on any track
in any direction
at any time!**

STOP! LOOK! LISTEN! LIVE!

Golden Rule of Waste Industry?





Safety is Everyone's Responsibility

Be Alert, Be Aware, Expect The Unexpected.

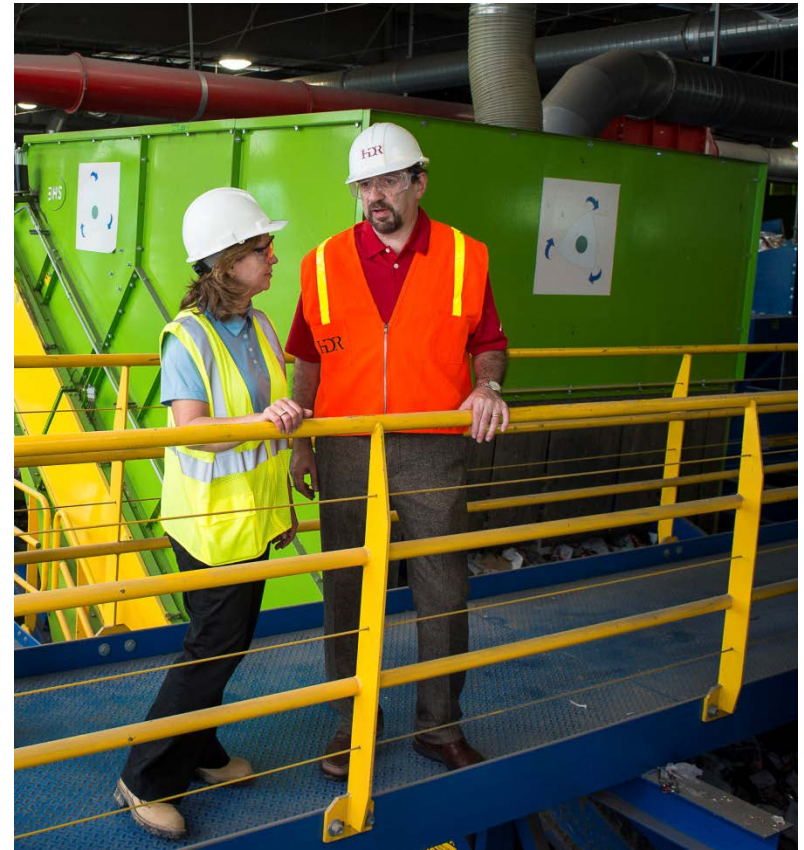
Where There's Trash There's Trouble.

Thanks, Stay Safe!

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AUGUST 24 - 27, 2015
GAYLORD PALMS | ORLANDO, FL