

## Barges and Waterways Safety

### The Risk

Safe and efficient transportation of pellets is vital to the success of the industry. River ways have long provided a cost effective means of shipment, but at a risk. The risk of working on or around barges must be managed effectively. Managing the risk of Slips and Falls, Falling Overboard, Oxygen Deficient Spaces, Machinery and Equipment, Pinch Points, and Injury from Line of Fire must be given adequate attention.

The following information outlines best practices to assist in managing the risk associated with working on or around waterways and barges.

### The Controls

#### Qualified Workers

Only trained and qualified workers should be allowed to participate in activities involving working on or near waterways. Qualified workers should complete training programs that adequately identify the hazards and demonstrate the competencies needed to effectively work around barges and waterways.

#### Personal Protective Equipment (PPE)

Workers should wear adequate PPE to protect themselves from injury. This can include, but is not limited to the following:

- Gloves
- Dust Mask
- Hardhat/Bump Hat
- Footwear
- Goggles
- Flotation Device
- High Visibility Clothing

#### Safety Attendants

Safety Attendants should be on site to monitor activities and report a “Man Overboard Rescue” if needed. Barge workers should never be left unattended while accessing or working on a barge.

#### Slips, Trips, Falls

Workers should employ the adequate procedures to protect themselves from slips, trips, or falls. This can include, but is not limited to the following:

- Keep all walking and working surfaces clean and clear of obstructions.
- Remove loose pellets from the barge deck. Loose pellets on the barge deck can result in poor walking / working conditions.
- Walk at a normal rate, keeping your hands out of your pockets.
- Utilize three-point contact when getting on or off of a barge.
- Slow down when moving between different surfaces.
- Do not jump from one barge to another or from a dock to a barge.
- Do not step on hatch covers.
- Close all hatch covers that are not in use. Be sure covers are latched closed.
- Step over cleats, kevels, timberheads and ropes – not on them.
- Modify your way of walking to match the surface, such as slippery or icy conditions.
- Wear shoes with good traction.
- Keep shoes clean of mud, snow, ice, spilled liquids and debris.
- Always maintain three points of contact on ladders.
- Always walk with tools and equipment facing away from the barge. Walkways are very confined and carrying a load on the inboard side decreases the walking surface.

### Oxygen Deficiencies

Areas covered with hatches and covers (cargo holds, wing tanks, etc...) have the potential to be oxygen deficient spaces due to off-gassing. To prevent injury:

- Do not put your head into a confined space. Toxic fumes can exist (CO, CO<sub>2</sub>, H<sub>2</sub>S, etc...). Follow confined space guidelines if work is needed in cargo holds, wing tanks and other confined spaces.
- Do NOT enter a cargo hold or wing tank to investigate a problem without proper confined space entry processes in place.

### Pinch Points

Positioning and securing barges can create the hazard of pinch points. Careful positioning and a high level of alertness is required to avoid serious harm. While working around barges the worker should remember to:

- Never be in a situation that places you between the barge and the dock or between two barges (gapped out).
- Never place your hand between the rope and a cleat, kevel or timber head.
- Stay clear of rope bights. Bights can cause amputation or throw you into the water.
- Stay out of the line of fire. Ropes can have extreme pressure and cause death due to the force of a rope that breaks under pressure.



Cleat



Kevel



Timberhead

## Man Overboard (MOB)

“Man Overboard” situations are very dangerous. Not only is the worker susceptible to drowning, but also to injuries sustained during the fall. To manage the risk of falling overboard workers should:

- Wear a Personal Flotation Device (PFD) when working in barge loading / dock areas.
- PFD’s must be inspected prior to use. Defective PFD’s should be removed from service and replaced. Check for frayed, damaged, or missing pieces.
- PFD’s must be properly adjusted.
- Never work with your back to the water.
- Never work on or over the water without a safety attendant.

“Man Overboard” rescue procedures should be developed **before** attempting to work on or over water. Rescue procedures should include the following as a minimum:

- First Aid Supplies readily available, including a blanket.
- Stokes Basket w/ permanent bridles capable of lifting 1,000 pounds (*see OSHA 1915.158, 1917.95, 1918.105*)
- Means to lift a worker from the water to the dock level.
- Emergency Numbers Posted.
- Throw rings equipped with 90’ throw ropes available at a minimum of every 70 feet.

“Man Overboard” rescuers should remember to:

- Maintain eye contact with the man overboard.
- Communicate “Man Overboard” to initiate rescue.
- Throw and Row – throw the life ring, then row to the worker.
- Never dive into the water to rescue a man overboard.
- Enter into the water only if equipped with a PFD, a life ring and safety attendant.
- Approach at a safe speed and distance.
- Move forward and take hold of the MOB under the armpits.
- Lean towards him and then lean back and pull, dragging him onto the boat.
- Observe the person and check for any warning signs of Hypothermia or other Health Risks.

Corresponding Regulatory Information: 29CFR 1910, 1915, 1918, 1919

### **Disclaimer**

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