



December 6, 2022

STAGING LARGE VALVES/COMPONENTS

PURPOSE/APPLICATION

Strike is often required to receive and store large valves and/or equipment on site before it can be installed. Staging this equipment presents its own hazards. These valves are often top-heavy and may lack a stable base. This procedure provides guidance on how to safely stage these valves and large equipment.

PPE

- Strike Minimum PPE

TRAINING

- Minimum Strike and site requirements
- Competent Equipment Operators
- Experienced riggers and tag line operators

TOOLS/EQUIPMENT

- Mobile lifting equipment
- Rated slings and hardware
- Pipe stands
- Dunnage

#	Job Steps	Hazards	Control Measures
1.	Prepare staging area	<ul style="list-style-type: none"> ❖ Soft or uneven ground conditions ❖ Trip/slip/fall hazards ❖ Creation of site congestion ❖ Potential thawing ground conditions 	<ul style="list-style-type: none"> ▪ Choose an area where the equipment can remain until it is required, double handling presents additional risks ▪ Where there is no level or firm area to stage the equipment, consider using rig mats or other temporary staging ▪ The weight of the equipment can cause it to sink into soft or thawing ground, ensure ground conditions can support the weight of the load ▪ If the equipment will remain in position during a change in season (thaw, rain, etc.), consider the potential impact this may have on the stability and adjust accordingly
2.	Position the truck or trailer for the offloading of the equipment	<ul style="list-style-type: none"> ❖ Contact with equipment, workers, or vehicles ❖ Loads shifting or falling 	<ul style="list-style-type: none"> ▪ Use spotters to move equipment into position ▪ Move all non-essential equipment out of the immediate area and control traffic in and out of the work area ▪ See SWP 44 – Mechanical Mobile Equipment Operations for more information ▪ Assign additional spotters as required ▪ Strike Dropped Object Hazard Management SWP-85

3.	Pre-use inspection of all lifting equipment	<ul style="list-style-type: none"> ❖ Equipment failure, pressure release, spills ❖ Workers in the line of fire of material falling or tipping ❖ Slippery or uneven, ground conditions 	<ul style="list-style-type: none"> ▪ Pre-use inspection of all equipment ▪ Ensure all lifting certifications are up to date/current for all equipment ▪ Verify all rigging and hardware are rated for the load ▪ Only certified equipment operators permitted to operate mechanical lifting equipment ▪ Verify all required competency assessment have been completed ▪ Review SWP 41 Critical Hoisting to verify classification and additional requirements for Critical Hoisting (where applicable) ▪ Review SWP 54 Rigging for more information ▪ Assign an experienced individual person to oversee the rigging and ensure tag line(s) are used
4.	Lift equipment from the trailer into position	<ul style="list-style-type: none"> ❖ Pinch/crush points around and between material ❖ Workers struck by equipment ❖ Working around suspended loads ❖ Fall to lower elevation ❖ Load swinging or falling 	<ul style="list-style-type: none"> ▪ Use engineered lifting points (where available) to lift the load ▪ Clear the area around the work and keep all workers not required for the lift out of the immediate area ▪ Use tagline(s) to control the load, position tagline operators out of the line of fire ▪ Once the equipment is raised off the trailer deck, the truck driver will be signaled to move ahead ▪ All workers are to stay out from under any suspended load ▪ Do not jump off the trailer, use an appropriate ladder for access and egress ▪ Set up danger tape with tagging and/or overhead work signs as required to keep other workers clear of the area
5.	Set equipment into position	<ul style="list-style-type: none"> ❖ Shifting equipment, load tipping, or falling over ❖ Equipment sinking 	<ul style="list-style-type: none"> ▪ Verify that dunnage is rated to support the weight of the equipment, see SWP 81 Cribbing and Pipe Cones for more information

			<ul style="list-style-type: none"> ▪ Verify that there is sufficient surface area to disburse the weight of the equipment, remember that if the dunnage sinks there is the potential that the equipment could tip or roll ▪ Consider potential changing ground conditions (e.g., from rainfall, thawing ground, etc.), especially where the equipment may need to remain in place during the spring thaw ▪ Do not unhook the equipment from the crane until the equipment is fully supported to prevent tipping, rolling, or moving
6.	Support any sections of the equipment which may impact the center of gravity	<ul style="list-style-type: none"> ❖ Equipment spinning or rolling in the saddle ❖ Pinch or crush points around the equipment if it rolls or tips 	<ul style="list-style-type: none"> ▪ Equipment will often have flange faces or connection points that are designed to be bolted or welded into place. These points will often impact the center of gravity of the equipment before it has been installed, all these points must be fully supported before the rigging is removed ▪ Use dunnage, pipe cones, or stands rated to support the load being placed on it ▪ Large equipment may appear stable when placed only to later roll or shift, this creates a hazard to anyone in the area. Always support all sections of equipment to reduce the likelihood of movement
8.	Remove rigging	<ul style="list-style-type: none"> ❖ Movement or shifting of the equipment ❖ Pinch points around or between equipment 	<ul style="list-style-type: none"> ▪ Have all workers clear of the area before adding slack to the rigging. Stop the task if there is any shifting or movement and reapply tension to the slings ▪ Keeps hands clear of pinch points ▪ Inspect all rigging as it is removed ▪ Inspect the dunnage and equipment periodically after it has been installed to check for movement or shifting

