XVI. Attachment 4a
Documented Inspection for Wire Rope Slings

Sling #:_____ Capacity (safe working load):_____ Length: _____

Sling #:_____ Capacity (safe working load):_____ Length: _____

Sling #:_____ Capacity (safe working load):_____ Length: _____

Sling #:_____ Capacity (safe working load):_____ Length: _____

Equipment Name:_____

PERFORM the following pre-use inspections: (Any unsat condition listed below is cause for rejection)

Sat	Unsat	
		VERIFY manufacturer's tag is installed indicating rated load.
		Visually **INSPECT** for worn, corroded or broken wires
Sling shall be considered defective if any of the following conditions exist:		
		Six broken wires in one rope lay
		Kinked, crushed, bird caged or distorted rope structure
		Evidence of heat damage
		Deformed, cracked, corroded or worn end attachments
		Three broken wires in one strand in one rope lay
		Wear or scraping of one-third original diameter of outside individual wires
		In standing ropes, more than two broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection

Inspection Performed by:_____ Date: _____

If any unusual defects are detected during the inspection, CONTACT the Brieser Equipment Manager to ensure proper documentation and final disposition of the Sling.

ROUTING	**PERSONEL MANAGER**	**Add to Scan**
	SCAN	**SAFETY/USER INSPECTIONS/WIRE ROPE SLINGS/MMDDYY**

XVII. Attachment 5

Minimum Inspection Requirements for Synthetic/Nylon Slings

Documented Inspection Requirements for Synthetic/Nylon Slings

Sling #:_____ Capacity (safe working load):_____ Length: _____

Sling #:_____ Capacity (safe working load):_____ Length: _____

Sling #:_____ Capacity (safe working load):_____ Length: _____

Sling #:_____ Capacity (safe working load):_____ Length: _____

Sling #:_____ Capacity (safe working load):_____ Length: _____

Equipment Name:_____

PERFORM the following pre-use inspections: (Any unsat condition listed below is cause for rejection)

Sat	Unsat	
		Acid or Caustic burns
		Melting or charring
		Snags, punctures, tears or cuts
		Broken or worn stitches
		Abnormal wear and wear or elongation exceeding manufacturer's recommendations
		Distortion or fittings/hardware
		Discoloration or rotting
		Excessive stretching or evidence of over-loading
		Powdered fiber between strands (unjacketed slings only)
		Manufacturer's tag is installed indicating rated load
		Hardened sling or stiffness in sling
		If applicable, One or both of the tell-tails is not visible or is less than ½ inch in length. Remove sling from service
		Lack of fiber-optic light transfer in sling models with the fiber-optic. Remove sling from service

Inspection Performed by:_____ Date: _____

If any unusual defects are detected during the inspection, CONTACT the Brieser Equipment Manager to ensure proper documentation and final disposition of the Sling.

ROUTING	**PERSONEL MANAGER**	**Add to Scan**
	SCAN	**SAFETY/USER INSPECTIONS/SYNTHETIC SLINGS/MMDDYY**

XX. Attachment 8

MOBILE CRANE/EXCAVATOR/BACKHOE PRE-LIFT CHECKLIST

Perform inspection on the following (as applicable):

Yes	No	N/A	
			Has the travel path been walked down to identify obstructions and hazards?
			Has the minimum clear distance from power lines been verified by measurement (i.e., laser measuring device in lieu of eyeball estimate)?
			Are operations taking place at night? Install adequate lighting.
			Management Approval is required for night operations.
			Are the tires properly inflated?
			Is the fuel tank at least half full?
			Did you complete the equipment pre-use inspection checklist?
			Is the equipment properly grounded?
			Are all personnel clear of the swing radius?
			Are all of the outriggers fully extended and level?
			Are you set up on safe ground?
			Do you have an accurate estimate for the weight of the load?
			Did you read and understand all notes on the load chart?
			Are you aware of what quadrants you can safely operate in?
			Have you identified your work radius according to the load chart?
			Do you have clear communications between the operator and the rigger?
			Is the designated spotter identified?
			Excavator/Backhoe Only
			Are approved lifting points being used?
			Lift capacity determination for the arm. Is the boom in its transport position?
			Lift capacity determination for the boom. Is the arm fully rotated outward?
			Crane Only
			Did you allow for the weight of the jib boom, hook block, crane cable, and the rigging?
			Are you reeved for the proper mechanical advantage?
			Is the counterweight fully extended and clear?
			Have you considered reduced crane capacity due to wind loading (wind velocity >20mph)?
			If used indoors, is the Fuel Selector Switch in PROPANE mode?

XXV. Attachment 13

Rigging and Lifting Plan Guidance

Conditions When a Rigging and Lifting Plan is Recommended

- The load weight & configuration (including all rigging components) exceeds 85% capacity of crane or rigging equipment.
- The load is "one of a kind" and critical to plant operations/ damage or destruction from the load would result in generation reduction or outage extension.
- The Sling Rating selected for lifting a load should be a minimum of 1.25 times the actual load weight to be lifted is greater than 25% due to the of the approved dynamic loading factor (1.25 x actual load weight = minimum rigging rating)
- The lift requires more than one crane (multiple-crane lift).
- The lift requires a mobile crane with outriggers that will be directly over underground piping or tunnels that could be damaged or collapse.
- The load is being moved horizontally with 2 or more hoists and the angle (at the loads highest position) of the load chain(s) are greater than 45 degrees from horizontal.
- The rigging used will have horizontal sling angles less than 30 degrees/ low headroom in location.
- The load will be lifted near energized power lines as defined in the Safety manual.
- The load is in a hazardous environment and or contains environmentally sensitive or controlled materials.
- Does the load have potential binding or interference fit & load cell usage is needed but not practical.
- Infrequently performed rigging activity or first time evolution?
- Does the rigging evolution involve/include two or more work groups and have all the rigging equipment/hardware been inspected to verify free of defects and satisfactory for performing the required lifts. All vendor supplied equipment/hardware is required to be inspected and meet the requirements of this procedure.

The Rigging and Lifting Plan Checklist on the next page is optional and may be used as the rigging plan.

Rigging & Lifting Plan Guidance

Rigging & Lifting Plan Checklist

	Signalman & Single Point of Contact (qualified rigger) has been designated?
	Do you know how much the load weighs by calculation, drawing or markings? Weight =_____Lbs. Load cell required.
	Is the lift going to be near unprotected energized conductors, such as crane bus or electrical equipment, wires, etc? – Robust barriers installed – Electrical lines protected or deenergized?
	Do you understand the load path?
	Has the load path been walked down for tag line requirements (for uncontrolled movement of loads) and obstructions or sharp objects that could damage slings?
	Have you inspected your rigging, verified load reductions, and is it satisfactory?
	Is the center of gravity known? Verify stability and capacity according to hitch type. (Vertical, Basket, Choke)
	Calculated for sling angle and de-rated the slings accordingly. Dynamic loading/additional stresses assessed.
	Is all rigging hardware selection adequate for the lift? Inspect periodically during lifting evolutions for signs of imminent failure.
	Does the load have any corners that require softeners / abrasion protection required? (Cornermax sling protection needed)?
	For inverted basket hitches, ensure sling attachment points are above the center of gravity
	Have you verified that nothing can shift when the load is lifted? (i.e. loaded gang box)
	Are the appropriate hand signals, if required, available at the job site? (OSHA standard)
	Has a safe lift zone been properly established and communicated.
	Safe set down contingency established? Cribbing available and inspected for set down.
	Are you aware that outdoor cranes shall be secured at wind speeds sustained 30 mph or above?
	Capacity is reduced approximately 45% when winds are sustained at 20 mph.
	Hoist ring usage – Torque per manufacturers specifications

Rigging & Lifting Plan Guidance

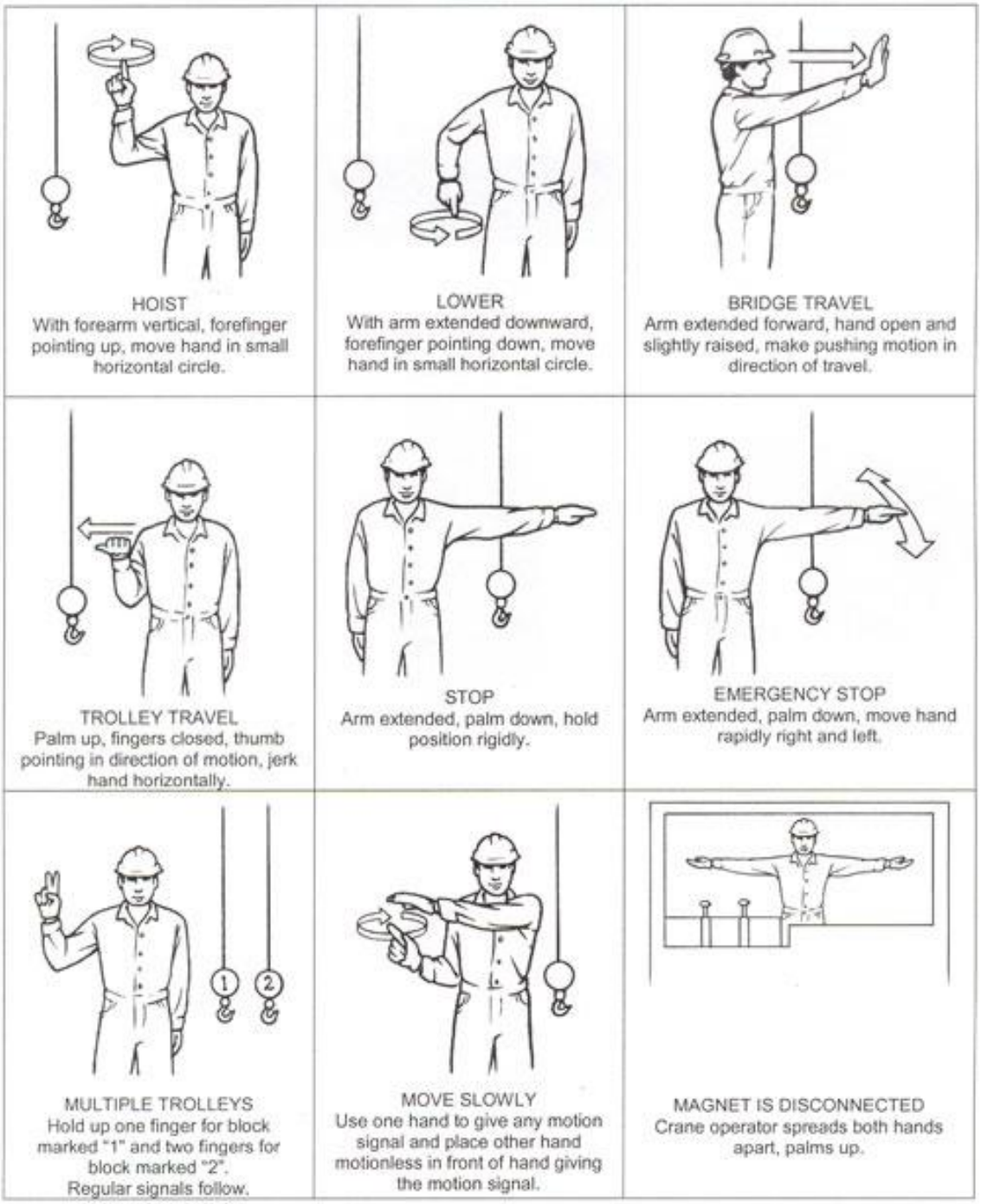
Rigging & Lifting Plan Checklist-Additional Items to Consider

- ✓ What is being lifted? _____
- ✓ Who is in charge of the lift? Is a competent rigger / Brieser oversight person required prior to moving the load? _____
- ✓ Shackle pins fully seated? – Eyebolts shouldered and adequate thread engagement?
- ✓ Does the rigging have appropriate identification? – Pre-use inspections completed?
- ✓ Does all rigging have adequate/known working load limits?
- ✓ Will there be any side or angular loading?
- ✓ Turnbuckles have at least full thread engagement?
- ✓ Will personnel be clear of suspended load? Safe lift zone established?
- ✓ Rigging attachment points approved for use, capacity, and visually inspected?
- ✓ Any unusual environmental concerns (weather, electrical wires, visibility, noise, high radiation areas, heat stress, etc)? _____
- ✓ Will personnel be restricted from elevations below the load path?
- ✓ For Mobil Crane lifts see attachment 8.

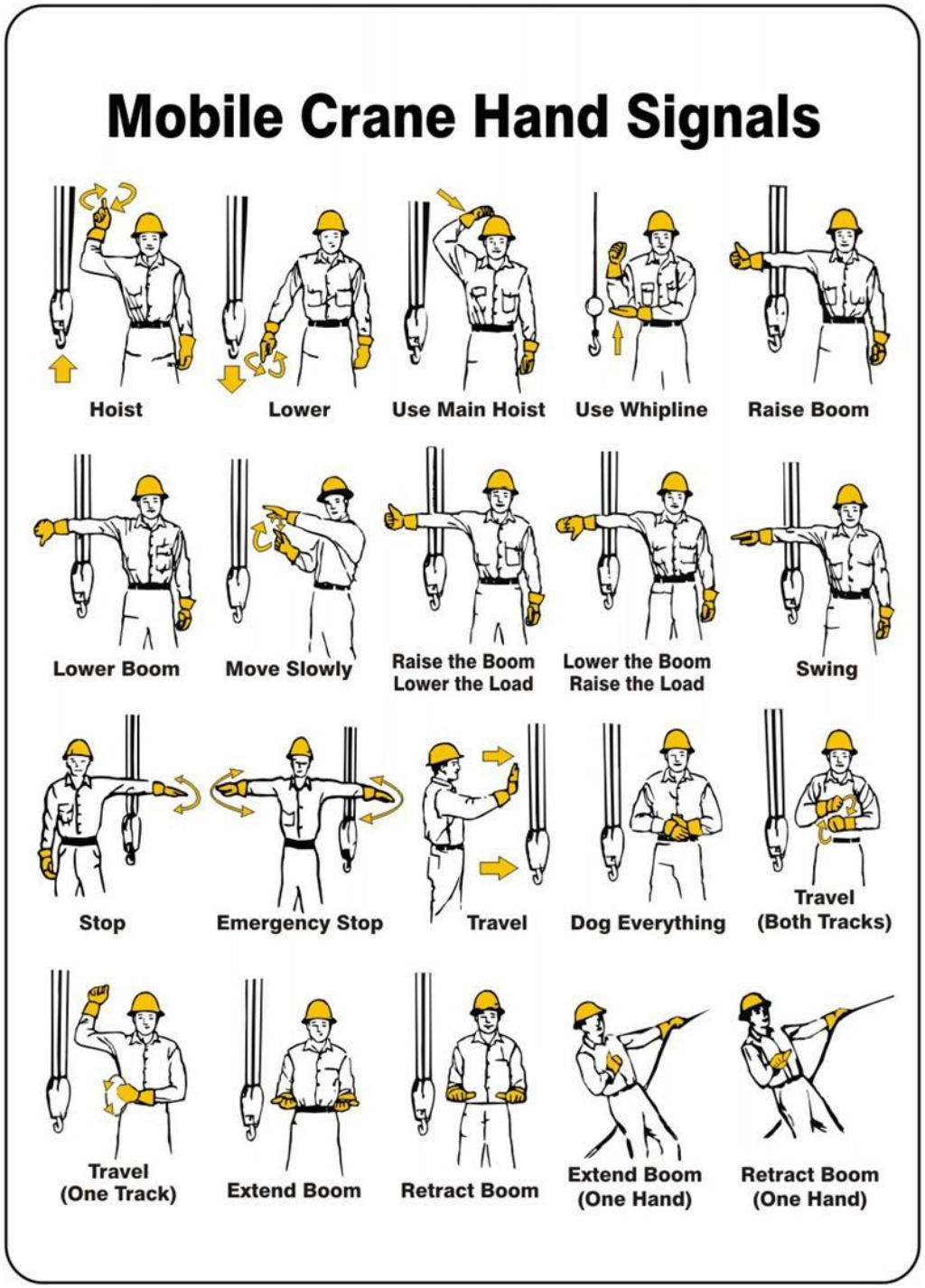
Brief description of lifting operation:

Checklist completion performed by:	Date:
Rigging Supervisor:	Date:

XXVI. Attachment 14



XXVII. Attachment 15



XXVIII. Attachment 16

Description of Job _____

Job # _____ Location _____

Start Date _____ Expiration Date _____

Requirements

- The Job Hazard Analysis shall be attached to this authorization and will be posted at the site. Job Hazard Analysis includes (as applicable):
  - Height the load will be raised
  - Potential swing of the load
  - Trip Hazards
  - Body Positioning
  - Explanation of how workers are not at risk of being struck by the load should rigging shift or fail.
  - Reasons why long handle tools and/or redundant rigging systems could not be used to eliminate the need for working under suspended load.
- A Pre-Job Brief shall be conducted with all workers prior to starting the activity and at the beginning of each subsequent shift.
- A Dedicated First Line Supervisor / Craft Labor supervisor (or designee) shall be assigned to the work activity and be in attendance until work activity is completed.

Name of Dedicated Supervisor

Authorization:

I have reviewed the attached Job Hazard Analysis and request for an exception from the normal prohibition against working on/under a suspended load and agree that this limited exception is warranted for the time frame listed above and the activities specified on the JHA.

The activity will be supervised by a dedicated First Line Supervisor/Craft Labor Supervisor (or designee) to ensure the work activity is limited to the described scope and all precautions and limitations documented in the Job Hazard Analysis are followed.

Submitted by Supervisor	Print Name	_____	Signature	_____	Date _____
Concurrence (Safety or Designee)	Print Name	_____	Signature	_____	Date _____
Approve (V.P. Operations)	Print Name	_____	Signature	_____	Date _____