

NAVSEA
STANDARD ITEM

FY-24

ITEM NO: 009-40
DATE: 25 OCT 2022
CATEGORY: I

1. SCOPE:

1.1 Title: Contractor Crane, Multi-Purpose Machine and Material Handling Equipment at a Naval Facility; provide

2. REFERENCES:

- 2.1 29 CFR Part 1910, Occupational Safety and Health Standards
- 2.2 29 CFR Part 1915, Occupational Safety and Health Standards for Shipyard Employment
- 2.3 29 CFR Part 1917, Marine Terminals
- 2.4 29 CFR Part 1926, Safety and Health Regulations for Construction
- 2.5 NAVFAC P-307, Management of Weight Handling Equipment

3. REQUIREMENTS:

3.1 Notify the SUPERVISOR one day prior to bringing any cranes, multi-purpose machines, material handling equipment, or construction equipment that may be used in a crane-like application to lift suspended loads on a Naval facility.

3.2 Comply with the requirements of 2.1 through 2.4, and Paragraph 11.1.b of 2.5, prior to bringing or using any contractor crane, multi-purpose machine and material handling equipment that may be used in a crane-like application to lift a suspended load on a Naval facility.

3.2.1 Maintain written documentation of the last weight test of the crane and all related weight handling equipment on site.

3.3 Ensure the handling and rigging gear and below the hook lifting devices and personnel comply with the following requirements:

3.3.1 Personnel performing rigging must have an understanding of all signs, notices, and operating instructions, and be familiar with the applicable hand signals prescribed by the ASME B30 standard for the type of crane in use.

3.3.2 Personnel performing rigging must be familiar with the rigging requirements in 2.1 through 2.4.

3.3.3 Provide qualified signal personnel in accordance with 2.4.

3.4 Inspect rigging gear in accordance with 2.1 through 2.4 and Paragraph 11.1.b of 2.5.

3.4.1 Maintain certification records on site available for review during all work.

3.5 Contractor must:

3.5.1 Ensure all inspections are performed in accordance with 2.1 through 2.5 (daily, monthly, quarterly, and yearly), and retain the current documentation of inspections. Documents must be kept on site.

3.5.1.1 Perform daily pre-use inspections and testing on all load hoisting and lowering mechanisms, boom hoisting and lowering mechanisms, swinging mechanisms, traveling mechanisms (if to be used that day), and safety devices.

3.5.2 Cranes that have to be re-rated must be in accordance with SAE Recommended Practice, Crane Load Stability Test Code J765 and documentation maintained on site.

3.5.3 Have an operational anti-two-block device or a two-block damage prevention feature for all points of two-blocking.

3.5.4 Have a boom hoist disconnect, shutoff, or hydraulic relief to automatically stop the boom hoist when the boom reaches a predetermined high angle.

3.6 Conduct a joint verification with the Government representative to ensure that a legible and indelible completed copy of Appendix P, Figure P-1 of 2.5 is maintained on the crane, multi-purpose and material handling equipment used in a crane-like application to lift suspended loads. The following certification and testing documentation must be on site prior to entry and use on any Naval facility:

3.6.1 Crane, multi-purpose and material handling equipment used in a crane-like application to lift suspended loads certification

3.6.2 Load testing

3.6.3 Yearly, monthly, and daily inspection logs

3.6.4 Rope/sling certifications

3.6.5 Operator certifications/designations

3.6.6 Designation of person performing log inspections

3.6.7 Cranes that are permanently located on a Naval facility must have a quarterly joint verification.

3.7 Develop and maintain on site a critical lift plan in accordance with Attachment A.

3.7.1 Complete and maintain a copy of Attachment B for each critical lift.

3.7.2 Notify SUPERVISOR of each critical lift no later than five days prior to the planned event.

3.7.3 Submit one legible copy, in hard copy or approved transferrable media, of Attachment A to the SUPERVISOR, upon request.

3.8 Report verbally each accident to the SUPERVISOR immediately but not later than 4 hours of such an event.

3.8.1 Secure the accident site and preserve the scene until released by the SUPERVISOR.

3.8.1.1 Conduct an accident investigation to establish root cause(s) of any accident.

3.8.2 Withhold further crane, multi-purpose and material handling equipment operations until the cause is determined and corrective actions are implemented and approved by the SUPERVISOR.

3.8.3 A crane and rigging gear accident is when any of the following occurs during crane, multi-purpose and material handling equipment operations:

3.8.3.1 Personnel injury or death

3.8.3.2 Material or equipment damage

3.8.3.3 Dropped load

3.8.3.4 Derailment

3.8.3.5 Two-blocking

3.8.3.6 Overload

3.8.3.7 Collision, including unplanned contact between the load, crane, multi-purpose, material handling equipment and/or other objects

3.8.4 Provide a formal written report of the event to the SUPERVISOR within one day of each accident.

3.8.5 Submit one legible copy, in approved transferrable media, of the accident report consisting of a summary of circumstances, and explanation of cause(s), and corrective actions taken, using Attachment C, to the SUPERVISOR within 15 days of each accident.

4. NOTES:

4.1 None.

ATTACHMENT A

Critical Lift Form

| |
|------------------------------|
| Location: |
| Date of critical lift: |
| Crane operator: |
| Crane/Rigging Supervisor: |
| Contractors: |
| Ship's Force representative: |
| Work Item number: |

| |
|------------------------|
| Type of Critical Lift: |
|------------------------|

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|------------------------------|
| Load Description: |
| Weight of load being lifted: |
| Size of load being lifted: |

| |
|---------------------------------------|
| Weight of Headache Ball: |
| Weight of Block: |
| Weight of Lifting Bar: |
| Weight of Slings & Shackles: |
| Total of other deductions: |
| Total weight of load plus deductions: |

| |
|---|
| OEM's maximum load capacities for the entire range of the lift: |
|---|

Lift Geometry

| |
|--|
| Crane position: |
| Boom length: |
| Boom angle: |
| Height of lift: |
| Radius for the entire range of the lift: |

Barge Mounted Mobile Cranes

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|--|
| Barge stability calculations identifying crane placement/footprint: |
| Barge list and trim based on anticipated loading: |
| Load charts based on calculated list and trim specific to the barge the crane is mounted on: |

Environmental Conditions

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|---|
| Environmental conditions under which lift operations are to be stopped: |
|---|

Rigging Plan

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|--------------------|
| Lift points: |
| Rigging gear: |
| Rigging procedure: |

Use space below to describe rigging plan:

Attachment "A" Instructions

- Location: Location where critical lift will be conducted, e.g. pier and vessel.
- Date of critical lift: When critical lift will be conducted. A critical lift plan is required for each day.
- Crane operator: Name of crane operator during critical lift.
- Crane/Rigging Supervisor: Person supervising crane/rigging operations during critical lift.
- Contractors: List all contractors involved with critical lift e.g. AITs, subcontractors and divers.
- Ship's Force representative: S/F representative notified of critical lift e.g. CDO.
- Work Item number: Navy work item number for which critical lift is being conducted.
- Type of Critical Lift: See NAVFAC P-307, Management of Weight Handling Equipment.
- Load Description: Self explanatory.
- Weight of load being lifted: Self explanatory.
- Size of load being lifted: Self explanatory.
- Weight of Headache Ball: Self explanatory.
- Weight of Block: Self explanatory.
- Weight of Lifting Bar: Self explanatory.
- Weight of Slings & Shackles: Self explanatory.
- Total of other deductions: Self explanatory. List other deductions.
- Total weight of load plus deductions: Self explanatory.
- OEM's maximum load capacities for the entire range of the lift: Review load chart.
- Crane position: Self explanatory.
- Boom length: Self explanatory.
- Boom angle: Self explanatory.
- Height of lift: Self explanatory.
- Radius for the entire range of the lift: Self explanatory.
- Lift points: Where on the load will the load be lifted from.
- Rigging gear: What rigging gear will be used during critical lift.
- Rigging procedure: How will the load be rigged and path the load will travel to destination.

ATTACHMENT B

| CONTRACTOR CRANE OPERATION CHECKLIST FOR CRITICAL LIFTS | | YES | NO |
|---|---|----------------|----|
| 1 | Does the operator know the weight of the load to be lifted? | | |
| 2 | Is the load to be lifted within the crane manufacturer's rated capacity in its present configuration? | | |
| 3 | Is the crane level and on firm ground? | | |
| 4 | Are outriggers required? | | |
| 5 | If so, are outriggers fully extended and down, and the crane load off the wheels? | | |
| 6 | If blocking is required, is the entire surface of the outrigger pad supported and is the blocking material of sufficient strength to safely support the loaded outrigger pad? | | |
| 7 | If outriggers are not used, is the crane rated for on-rubber lifts by the manufacturer's load chart? | | |
| 8 | Is the swing radius of the crane counterweight clear of people and obstructions and accessible areas within the swing area barricaded to prevent injury or damage? | | |
| 9 | Has the hook been centered over the load in such a manner to minimize swing? | | |
| 10 | Is the load well secured and balanced in the sling or lifting device before it is lifted more than a few inches? | | |
| 11 | Is the lift and swing path clear of obstructions? | | |
| 12 | If rotation of the load being lifted is hazardous, is a tag or restraint line being used? | | |
| 13 | Are personnel prevented from standing or passing under a suspended load? | | |
| 14 | Is the crane operator's attention diverted? | | |
| 15 | Are proper signals being used at all times? | | |
| 16 | Do the operations ensure that side loading is prohibited? | | |
| 17 | Are personnel prevented from riding on a load? | | |
| 18 | Are start and stop motions in a smooth fluid motion (no sudden acceleration or deceleration)? | | |
| 19 | If operating near electric power lines, are the rules and guidelines understood and adhered to? | | |
| 20 | Is the lift a critical lift? | | |
| 21 | If so, are critical lift regulations understood, check-off sheets initialed and signed off, and was there an interactive brief conducted with associated personnel? | | |
| 22 | Is Appendix P, Figure P-1 of 2.6 current, filled out completely, and posted in the crane? | | |
| Contractor: | | Subcontractor: | |
| Location: | | Date: | |

Attachment C
FOR OFFICIAL USE ONLY

CRANE AND RIGGING GEAR ACCIDENT REPORT

| | |
|--|---|
| Accident Category: <input type="checkbox"/> Crane Accident <input type="checkbox"/> Rigging Gear Accident | |
| From: | To: SUPERVISOR |
| Activity: | Report No: |
| Crane No: | Category: Accident Date: Time: hrs |
| Category of Service: <input type="checkbox"/> SPS <input type="checkbox"/> GPS | Crane Type: Crane Manufacturer: |
| Was Crane/Rigging Gear Being Used in SPS? Yes _____ No _____ | Was Crane/Rigging Gear Being Used in a Complex Lift/Critical non-crane rigging operation? Yes _____ No _____ |
| Location: | Weather: |
| Crane Capacity: | Hook Capacity: Weight of Load on Hook: |
| Fatality or Permanent Disability? <input type="checkbox"/> Yes <input type="checkbox"/> No | Material/Property Cost Estimate: |
| Accident Type: <input type="checkbox"/> Personal Injury <input type="checkbox"/> Over load <input type="checkbox"/> Derail <input type="checkbox"/> Damaged Rigging Gear <input type="checkbox"/> Load Collision <input type="checkbox"/> Two Blocked <input type="checkbox"/> Dropped Load <input type="checkbox"/> Damaged Crane <input type="checkbox"/> Crane Collision <input type="checkbox"/> Damaged Load <input type="checkbox"/> Other Specify _____ | |
| Cause of Accident: <input type="checkbox"/> Improper Operation <input type="checkbox"/> Equipment Failure <input type="checkbox"/> Inadequate Visibility <input type="checkbox"/> Improper Rigging <input type="checkbox"/> Switch Alignment <input type="checkbox"/> Inadequate Communication <input type="checkbox"/> Track Condition <input type="checkbox"/> Procedural Failure <input type="checkbox"/> Other Specify _____ | |

| | | | |
|---|-----------------|------|------|
| Chargeable to: <input type="checkbox"/> Crane Walker <input type="checkbox"/> Rigger <input type="checkbox"/> Operator <input type="checkbox"/> Maintenance <input type="checkbox"/> Management/Supervision <input type="checkbox"/> Other Specify _____ | | | |
| Crane Function: <input type="checkbox"/> Travel <input type="checkbox"/> Hoist <input type="checkbox"/> Rotate <input type="checkbox"/> Luffing <input type="checkbox"/> Telescoping <input type="checkbox"/> Other <input type="checkbox"/> N/A | | | |
| Is this accident indicative of a recurring problem? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, list Accident Report Nos.: _____ | | | |
| ATTACH COMPLETE AND CONCISE SITUATION DESCRIPTION AND CORRECTIVE/PREVENTIVE ACTIONS TAKEN AS ENCLOSURE (1). Include probable cause and contributing factors. Assess damages and define responsibility. For equipment malfunction or failure, include specific description of the component and the resulting effect or problem caused by the malfunction or failure. List immediate and long term corrective/preventive actions assigned and respective codes. | | | |
| Preparer: | Phone and email | Code | Date |
| Concurrences: | | | |
| | Code | Date | |
| | Code | Date | |
| Certifying Official (Crane Accidents Only): | Code | Date | |

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Attachment “C” Instructions

CRANE AND RIGGING GEAR ACCIDENT REPORT INSTRUCTIONS

Electronic submission will be accepted without signatures but the names of the preparer, concurring personnel, and certifying official (for crane accidents only) must be filled in.

1. Accident Category: Indicate either crane accident or rigging gear accident.
2. From: The contractor that is responsible for reporting the accident.
3. Activity: The naval activity where the accident took place.
4. Report No.: The activity assigned accident number (e.g., 95-001).
5. Crane No.: The activity assigned crane number (e.g., PC-5), if applicable.
6. Category: Identify category of crane (i.e., 1, 2, 3, or 4), if applicable.
7. Accident Date: The date the accident occurred.
8. Time: The time (24 hour clock) the accident occurred (e.g., 1300).
9. Category of Service: Check the applicable service (SPS as defined by NAVSEA 0989-030-7000).
10. Crane Type: The type of crane involved in the accident (e.g., mobile, bridge), if applicable.
11. Crane Manufacturer: The manufacturer of the crane (e.g., Dravo, Grove, P&H), if applicable.
12. SPS: Was the crane or rigging gear being used in an SPS lift?
13. Complex lift: Was the crane or rigging gear being used in a complex lift?
14. Location: The detailed location where the accident took place (e.g., building 213, dry dock 5).
15. Weather: The weather conditions at time of accident (e.g., wind, rain, cold).
16. Crane Capacity: The certified capacity of the crane (e.g., 120,000 pounds), if applicable.
17. Hook Capacity: The capacity of the hook involved in the accident at the maximum radius of the operation, if applicable.
18. Weight of Load on Hook: If applicable, the weight of the load on the hook.
19. Fatality or Permanent Disability?: Check yes or no.
20. Material/Property Cost Estimate: Estimate total cost of damage resulting from the accident.
21. Reported to NAVSAFECEN?: Self-explanatory.

Attachment "C" Instructions

22. Accident Type: Check all that apply.
23. Cause of Accident: Check all that apply.
24. Chargeable to: Check all that apply.
25. Crane Function: Check the function(s) in operation at time of accident. Check all that apply. Check N/A if a rigging gear accident.
26. Is this a recurring problem?: Check yes or no. Identify any other similar accidents.
27. Situation Description/Corrective Actions: Self-explanatory.
28. Preparer: Self-explanatory.
29. Concurrences: Self-explanatory.
30. Certifying Official (Crane Accidents Only): Self-explanatory.