

**Newport News Shipbuilding
Contractor Environmental, Health and Safety
Resource Manual**

Cranes

CRANES

1. *Hazard and Reference*

The use of cranes at NNS presents a serious potential hazard to personnel and to equipment. The requirements listed here are taken from the NNS *Crane Program Manual*, which is the primary NNS reference. These requirements will be updated as necessary when this primary reference is changed.

2. *Regulations*

Each contractor owning and/or operating cranes at NNS shall ensure all of their cranes and crane operators meet applicable OSHA requirements. The requirements for crane operation are specified in 29 CFR 1910.180, 29 CFR 1926 and 29 CFR 1918.

3. *General Requirements*

During the NNS pre-approval process (see General Information), each contractor whose employees will operate cranes must provide to the NNS Environmental, Health and Safety Department a copy of their written Crane Safety Program. This document must describe the contractor's program for complying with each element of the applicable OSHA standard(s). The contractor shall provide a copy of any changes to NNS on an annual basis.

Contractors shall ensure only properly trained personnel are permitted to operate a crane at NNS. Each contractor operating cranes at NNS shall provide to NNS Department O48, Crane Engineering & Quality, prior to bringing the crane onto NNS property, a completed copy of the Certification of Compliance, Newport News Form NN 9035 (see Appendix E). Fax the COC to (757) 688-4026.

The completed COC must also be displayed in the crane cab at all times while the cranes are on NNS property. The COC (see Appendix E) must be signed by a responsible company officer of the employer that provides cranes for any lifting and handling work at NNS. By his signature on the COC, the employer certifies that:

- (1) The COC is displayed on all cranes at all times while the cranes are on NNS property.
- (2) The crane and crane operators provided by his company for work at NNS comply with all applicable OSHA requirements,

- (3) Each person operating cranes at NNS is fully trained and qualified to operate the equipment at NNS.
- (4) Equipment and personnel certifications will remain valid while operating at NNS.
- (5) All cranes are equipped with an anti-two-blocking device that, when activated, disables all crane function whose movement can cause two-blocking.
- (6) No safety devices will be by-passed during lifting and handling operations at NNS.
- (7) Any lifting and handling related accident or incident involving the employer's cranes or operators will be reported to NNS (as discussed below).
- (8) Crane operators shall attend NNS crane orientation prior to operating a crane.

4. ***Other Requirements***

Contractors shall not park vehicles or place materials on, or allow anything to overhang the yellow painted zone that designates the crane's travel path zone. Contractors shall not allow loads to pass over personnel or allow personnel to work on or under a suspended load.

Contractors shall ensure their crane operators or riggers inspect handling equipment at the beginning of each shift and prior to each use. Contractors shall also ensure their crane operators or riggers do not use handling equipment that does not meet the manufacturer's inspection requirements for safe operation, and never exceed manufacturer's capacity ratings

Contractors shall ensure their crane operators or riggers use the crane's horn and rigger's whistle to warn personnel working in the area to stay clear of the crane's operation.

5. ***Non-Operating Crane Access Pass***

- (a) Contractors brings boom trucks or other service trucks with permanently mounted cranes onto NNS property which will not be used for lifting shall complete a Non-operating Crane Access Pass, Newport News Form NN 9239 (Appendix B, Y-1098), in lieu of a COC prior to being allowed entry. This certificate must be completed and visibly posted in the cab at all times while the truck is on NNS property.

- (b) By signing the Non-operating Crane Access Pass, the driver of the vehicle certifies that he or she will ensure no lifts are made with the crane while on NNS property.
- (c) Any contractor who is found making lifts with a truck-mounted crane with a posted Non-operating Crane Access Pass will be subject to dismissal and may be refused access to future work at NNS.

6. *Mobile Cranes*

Mobile cranes shall have a manufacturer's load chart posted in the cab. All operators shall be familiar with the chart and how to use the load chart. No crane shall be operated in excess of the load limits on the manufacturer's load chart for that crane. The weight of all auxiliary handling devices, such as hoist blocks, hooks, and slings shall be considered a part of the load rating.

Outriggers shall be fully extended and used when lifting in other than over the end positions on all mobile cranes except locomotive cranes. All mobile cranes used for personnel handling must have written or documented approval from the manufacturer of the crane. Outriggers shall be used when lifting personnel. All floats/personnel baskets will be checked to ensure that they are structurally safe and have a visible load rating.

Mobile cranes shall not travel without the hook being secured. Accessible areas within the swing radius of the outermost part of the body of a revolving crane shall be guarded to prevent an employee from being struck or crushed by the crane.

7. *Reporting Crane Accidents/Incidents*

- (a) A crane accident occurs when any one or more of the elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in the following:
 - (1) Personnel injury or death. Minor injuries that are inherent in any industrial operation, including strains and repetitive motion related injuries, shall be reported by the normal personnel injury reporting process of the activity in lieu of these requirements.
 - (2) Material or equipment damage.
 - (3) Dropped load.
 - (4) Derailment.
 - (5) Two-blocking.
 - (6) Overload.
 - (7) Collision, including unplanned contact between the load, crane, and/or other objects.

- (8) Items c, d, e, f, and g are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure), is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.).
- (b) In the event of a crane accident, the following actions **must** be taken:
- (1) Stop work immediately and secure the site. Do not alter the scene of the accident unless it is necessary for the safety of personnel or property.
 - (2) Call *911 (from shipyard phones) or 380-2222 (from cell phone) for emergency assistance, if needed.
 - (3) Call 688-9888 to report the accident to the Facilities Service Desk. The Facilities Service Desk will notify the Newport News Crane Accident Response Team.
 - (4) Make sure that anyone who was involved in or has knowledge of the accident remains near the area.
 - (5) Wait for the Crane Accident Response Team to arrive.
- (c) Following a crane accident, the contractor is required to perform a complete investigation of the accident and provide the Newport News Crane Accident Response Team with a written accident report detailing the following information:
- (1) **Date** – date accident occurred.
 - (2) **Time** – time accident occurred (hour and minute).
 - (3) **Personnel Injury** – “YES” if injury occurred, “NO” if injury did not occur.
 - (4) **Asset** – equipment number or model number.
 - (5) **Asset Description** – Mobile Crane, Truck Crane, Wagon Crane, etc.
 - (6) **Asset Location** – where the crane was working when the accident occurred.
 - (7) **Accident Cause** – what caused the accident? Examples: Operator Error, Rigger Error, Design Error, Electrical/Mechanical Failure, etc.
 - (8) **Brief Damage Description** – briefly describe what damage occurred to any equipment or property.
 - (9) **Employees Involved** – provide name, social security number, employee’s role on the job, and “YES” or “NO” if the employee was injured.

- (10) **Accident Description** – describe, in detail, the events occurring before the accident, the accident itself, what happened to cause the accident, and the events that immediately followed the accident.
 - (11) **Injury Description** – provide a description of the injury or injuries which resulted from the accident.
 - (12) **Immediate Corrective Actions** – list the actions taken immediately following the accident (i.e. securing the load, attending to the injured, notifying the Maintenance Service Desk, etc.).
 - (13) **Investigation Findings** – list pertinent information gathered from the investigation that are major facts contributing to the accident.
 - (14) **Apparent Cause** – the specific act or action that caused accident.
 - (15) **Permanent Corrective Action(s)** – specify remedial measures taken or planned to prevent the accident from recurring. The corrective action must be directly related to the “Apparent Cause”.
- (d) The NNS Crane Accident Response Team will also conduct an investigation and will prepare a separate accident report for NNS use.

8. *Surveillance*

- (a) The NNS Responsible Party must notify Department X36 of any contractor cranes working at Newport News.
- (b) Department X36 performs daily surveillance of contractor crane activities at Newport News to ensure:
 - (1) Contractor cranes are set up properly.
 - (2) All handling equipment is in good condition and is being properly used.
 - (3) All rigging is being performed in a safe manner.
- (c) In addition to surveillance, contractor crane operations may be audited at any time while on NNS property to ensure:
 - (1) The COC is properly completed and displayed on the crane.
 - (2) The ODCL was properly completed and retained.
 - (3) All installed safety devices are operational.
 - (4) The operator understands how to report a crane accident.

- (5) Equipment OSHA inspections and test are up-to-date.
- (d) At any time, contractor crane operations may be stopped if any of the above listed requirements are not met or if the operations are thought to be unsafe. A contractor may be disqualified from future work at Newport News Shipbuilding for multiple deficiencies, or if his or her safety program is considered to be inadequate.