

**CORPORATE LIFTING AND HANDLING MANUAL  
(PSNS&IMF)**

<b>Title:</b>  <b>CONTRACTOR CRANES AND RIGGING</b>	<b>Procedure Number:</b> <b>VOLUME I – CHAPTER 8</b>	
	<b>Change Status</b>	
	Corporate: Rev. D	Local: CH-8
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<p><b>DESCRIPTION AND REASON FOR CHANGE:</b> This change supersedes Change 7 of this chapter. Changes are described on Sheet i.</p>		
<p><b>ACTION:</b> This is a complete change. Replace all sheets with Change 8.</p>		
<p>This chapter is applicable to: ALL CONTRACTOR OPERATED CATEGORY 1 OR 4 CRANES, MULTI-PURPOSE MACHINES, FORKLIFTS, CONSTRUCTION EQUIPMENT WHEN USED AS CRANES TO LIFT SUSPENDED LOADS AND RIGGING GEAR IN WEIGHT HANDLING OPERATIONS</p>		

**Approved by:**

/s/	3/22/13
S. ELLIOTT, C/710	Date

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(9-6-11)  
Revision D

**CORPORATE LIFTING AND HANDLING MANUAL**

**VOLUME I - CHAPTER 8**

**CONTRACTOR CRANES AND RIGGING**

**COGNIZANT ACTIVITY  
PUGET SOUND NAVAL SHIPYARD AND  
INTERMEDIATE MAINTENANCE FACILITY**

**CODE 710 CONCURRENCES**

<b>NORFOLK</b>	<u>/s/ C. Sturkie</u>	<b>DATE</b>	<u>8/1/11</u>
<b>PEARL HARBOR</b>	<u>/s/ B. Hanaoka</u>	<b>DATE</b>	<u>8/5/11</u>
<b>PORTSMOUTH</b>	<u>/s/ S. Rhodes</u>	<b>DATE</b>	<u>9/2/11</u>
<b>PUGET SOUND</b>	<u>/s/ S. Elliott</u>	<b>DATE</b>	<u>9/6/11</u>

(All signatures on file.)

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## CHANGE SYNOPSIS

<b>Paragraph</b>	<b>Description</b>
5.1.1	Added “and associated rigging gear” to first sentence.
5.2.5	Corrected drawing numbers for Shipyard/NBK pier and ground loading limit details. Added Public Works drawing numbers for crane travel routes when wheel axle loads exceed 32,000 lbs.
6.1.4	Added that the contractor shall provide documentation to the Contracting Officer from the crane manufacturer showing maximum outrigger load and maximum axle loads upon notification of intent to bring a crane or other equipment onto Shipyard/NBK Bremerton site.
6.1.10.1	Clarified that configuration information shall include the maximum axle loads in a travel/lift configuration and the maximum outrigger loads of the crane for the configuration to be used.

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**VOLUME I - CHAPTER 8**  
**CONTRACTOR CRANES AND RIGGING**

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# LIFTING AND HANDLING MANUAL

## VOLUME I - CHAPTER 8

### CONTRACTOR CRANES AND RIGGING

#### 1. PURPOSE

1.1 To establish appropriate conditions for entry of contractor cranes into the Shipyard *[and NAVAL BASE KITSAP (NBK) Bremerton site]* to ensure each crane, *[multi-purpose machine, material handling equipment, construction equipment used to lift loads suspended by rigging gear]*, crane operator, and associated rigging is safe for operation and in compliance with existing Government regulations and policies. These conditions have been established in order to prevent the occurrence of damage to Government property and injury to personnel by contractors operating weight handling equipment (WHE) within the confines of the Shipyard *[and NBK Bremerton site]*.

1.2 To establish a contractor crane operations oversight plan whereby the contracting officer and cognizant Shipyard Lifting and Handling Department personnel are notified in advance of any crane planning to enter the Shipyard *[NBK Bremerton site, or of any multi-purpose machine, material handling equipment, construction equipment that will be used to lift loads suspended by rigging gear]*.

#### 2. SCOPE

This instruction relates directly to the use of non-Navy-owned and operated category 1 or 4 cranes, multi-purpose machines, forklifts, construction equipment and rigging gear when used on Navy *[Shipyard/NBK Bremerton site]* property to lift suspended loads. *[For the purposes of this instruction, the term “crane” shall include multi-purpose machines, material handling equipment, construction equipment used to lift loads suspended by rigging gear, unless otherwise specified.]* In addition to cranes rented or leased for operation by an activity, other non-Navy owned cranes, multi-purpose machines, forklifts, and construction equipment are frequently utilized on activity property. These cranes can be from a variety of sources and are generally incidental to construction contracts, ship repair contracts, demolition contracts, maintenance and other service contracts, deliveries of supplies and equipment, etc. Numerous organizations, including *[NBK Bremerton site; NAVSUP Fleet Logistics Center Puget Sound]* tenant activities, ships, supply departments, ROICC's, etc., have contracting authority and very often the need for cranes is not anticipated when contract documents are written. The following requirements apply to any contracted work utilizing category 1 or 4 cranes at a naval activity. Navy activity (i.e., host activity) commanding officers shall promulgate the following minimum requirements to tenants and contracting officers for inclusion in contracts, statements of work, purchase orders, etc., as stipulated in reference 3.1. For the purposes of this instruction, “contractor” includes other military services and other government agencies that operate WHE on shipyard *[NBK Bremerton site]* property. These requirements do not apply to shipboard cranes or

rigging equipment. These requirements do not apply to cranes that enter the activity but are not used for lifting, or other machines not used to lift loads suspended by rigging equipment. *[For non-Navy-owned and operated cranes and rigging gear entering NBK BANGOR, NBK KEYPORT, and NBK MANCHESTER, the requirements of reference 3.9 apply.]*

### **3. REFERENCES**

3.1 NAVFAC P-307, Management of Weight Handling Equipment

3.2 Code of Federal Regulations (CFR), Title 29, Chapter XVII, Part 1910, Occupational Safety and Health Standards

3.3 CFR, Title 29, Chapter XVII, Part 1915, Occupational Safety and Health Standards for Shipyard Employment

3.4 CFR, Title 29, Chapter XVII, Part 1917, Marine Terminals

3.5 CFR, Title 29, Chapter XVII, Part 1926, Safety and Health Regulations for Construction

3.6 American Society of Mechanical Engineers (ASME) B30.3 through B30.6, B30.8 through B30.10, and B30.20 through B30.22, *[B30.26,] "Safety Standards for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings"*

3.7 OPNAVINST 5100.23, Navy Safety and Occupational Health Program Manual

*[3.8 NAVSHIPYDPUGETINST P5100.66A, Occupational Safety and Health Manual*

*3.9 NAVBASEKITSAPINST 11450.1, Cranes Owned and Operated by Private Contractors]*

### **4. GENERAL REQUIREMENTS**

4.1 Cranes operated by non-Navy employees shall, as a minimum, meet applicable Occupational Safety and Health Act (OSHA) requirements, including, but not limited to, references 3.2 through 3.5.

4.2 All contracting officers involved in awarding and/or monitoring contracts in which a contractor may be required to bring a crane on Shipyard *[NBK Bremerton site]* property to perform work shall invoke applicable reference 3.6 and OSHA requirements, and the requirements of Appendix 6.1.

4.3 The contracting officer shall be the primary point of contact for reporting Shipyard[/NBK Bremerton site] concerns regarding contractor crane operation(s) believed to be in violation of safety and/or contractual requirements. Disagreement as to the satisfactory condition of the crane and/or rigging gear shall be resolved between the contracting officer and the contractor via appropriate contractual means.

4.4 Lifting and Handling Department (Code 700); [Environment, Safety and Health Office] (Code 106); and Shipyard Port Services Office personnel shall not replace nor hinder contracting officer's responsibility/authority. However, Code 700, Code 106, and Port Services Office personnel are authorized to stop work any time a contractor crane operation is considered unsafe or presents an imminent danger to the Shipyard[/NBK Bremerton site].

## 5. RESPONSIBILITIES

5.1 Lifting and Handling Department Head Code 700 is responsible for:

5.1.1 Ensuring a surveillance program is in place that monitors non-Navy owned and operated cranes [and associated rigging gear] on the Shipyard[/NBK Bremerton site]. The program will observe that the cranes are inspected, well maintained, and safe for operation, that rigging gear is well maintained and safe for use, and that operations are conducted in accordance with the crane's operating requirements.

5.1.2 Ensuring that all contracting officers include crane safety, certification, and personnel qualification requirements in their respective contract documents [as outlined in reference 3.1].

5.1.3 Ensuring that contracting officers include the requirement for OSHA third party certification of applicable cranes in contracts as outlined in references 3.1 and 3.7. [Third party certifications are not required for multi-purpose machines, material handling equipment, construction equipment used to lift loads suspended by rigging gear.]

5.1.4 Providing oversight of contractor accident investigations and corrective actions.

5.1.5 Providing a representative from the Lifting and Handling Department to observe inspections performed by contractors prior to crane entry, review applicable crane and[/or equipment] ~~wire rope certification~~ documents, and review the crane operator qualification documentation.

5.1.6 Ensuring that Lifting and Handling Department managers or designated representatives, in coordination with contracting officers, spot check crane operations and report unsafe practices to the respective contracting officer [via Code 740.1 Accident Prevention]. Accordingly, the Lifting and Handling Department shall:

5.1.6.1 Monitor contractor operations using the checklist of reference 3.1. Findings shall be documented per Volume I Chapter 5 and formally issued to the respective contracting officer and/or agency responsible to notify the contractor to correct the problem and immediately suspend operations as deemed appropriate. A formal response to the surveillance report shall be required.

5.1.6.2 Observe how the contractor has "set up" the crane at the work site to verify the crane is safe for operation and is within imposed load limitations, as applicable.

5.1.7 The Rigging and Equipment Operations Division Manager, or the designated alternate, shall be the source from which authorization is obtained prior to Shipyard rigging personnel assisting/working with contractor personnel. A procedure shall be developed for the specific case and approved by Code 740.

*[5.1.8 The Regional Crane Inspection and Test Branch (Code 725) shall carry out responsibilities of reference 3.9 for non-Navy-owned and operated cranes and rigging gear entering NBK BANGOR, NBK KEYPORT, and NBK MANCHESTER.]*

5.2 Contracting Officer. For the purposes of this document, the term is understood to be defined as the person with the overall responsibility for contracts at an activity. Each contracting officer, or his/her designated representative, involved in awarding and/or monitoring contracts shall:

5.2.1 Invoke the requirements of Appendix 6.1 where a contractor may be required to bring a crane or multi-purpose machines, material handling equipment, or construction equipment that may be used in a crane-like application to lift suspended loads on Shipyard *[NBK Bremerton site]* property. The contracting officer shall ensure compliance with contract requirements, provide oversight of contractor crane and rigging operations, and provide oversight of contractor accident investigations and corrective actions. The degree of oversight shall be based upon the risk to Government personnel and property. Requirements in Appendix 6.1 shall be invoked whenever a contractor brings a crane onto Shipyard *[NBK Bremerton site]* property that is intended to be used for lifting and handling operations. Ensure compliance of any subcontracts to the requirements set forth in the original contract.

5.2.2 Verify that non-Navy owned rigging used on Shipyard *[NBK Bremerton site]* property by contractor personnel meets the requirements of applicable reference 3.6/OSHA standards.

5.2.3 Verify that contractor personnel operating non-Navy owned cranes on Shipyard *[NBK Bremerton site]* property are fully qualified to perform their assigned work prior to starting work.

5.2.4 Be present during contractor's initial inspection of each crane and rigging gear prior to the contractor starting work on Shipyard/[NBK Bremerton site] property. Contracting officer's observation of contractor inspections shall be required upon delivery of the crane and rigging gear to Shipyard/[NBK Bremerton site] property. It shall be the sole responsibility of the contractor to demonstrate to the contracting officer and designated Shipyard personnel that the crane and associated rigging gear are in good working order and safe for use.

5.2.5 Specify allowable access routes and loading limitations of piers and waterfront areas involved in the contract. *[Shipyard/NBK Bremerton site pier load limit details are available on Public Works Drawing 63954. Shipyard/NBK Bremerton site ground load limit details are available on Public Works Drawing 63752 (A-size). In the event the contractor must transit the Shipyard/NBK Bremerton site with a mobile crane exceeding 32,000 lb axle load, travel shall be confined to travel paths shown on Public Works Drawings 56933 and 63703. The drawings may be requested from Plan Files (Bldg 467, 3rd floor) in \*.pdf format.]* This information shall be provided prior to the contractor moving the crane onto Shipyard/[NBK Bremerton site] property.

5.2.6 Verify that contractor personnel comply with loading limitations provided per paragraph 5.2.5.

5.2.7 To avoid the use of unsafe cranes and equipment, the contracting office or designated representative shall perform surveillances to assure cranes, multi-purpose machines, material handling equipment, or construction equipment and/or associated rigging gear are in acceptable condition and used properly. Develop an oversight plan that is concurred to by the Lifting and Handling Department. Monitor contractor crane and rigging operations (including multi-purpose machines, material handling equipment, or construction equipment that may be used in a crane-like application to lift suspended loads) using the checklist of reference 3.1. Copies shall be kept on file for one year.

5.2.8 The contracting officer shall make the following notifications:

5.2.8.1 Notify the Lifting and Handling Department of the contractor's scheduled crane entry or of any multi-purpose machines, material handling equipment, or construction equipment that may be used in a crane-like application to lift suspended loads. The Lifting and Handling Department representative shall be notified during normal Monday through Friday day shift hours no less than 3 working days in advance. Crane entry onto Shipyard/[NBK Bremerton site] property during back shift, weekend, or holiday hours of operation shall be by prior arrangement only. A copy of the required documentation identified in Appendix 6.1 shall be provided along with notification.

5.2.8.2 The Lifting and Handling Department representative shall be notified upon arrival of the crane to allow the opportunity to observe pre-work inspections.

5.2.8.3 To ensure positive security from the seaward side of the Shipyard [NBK Bremerton site], it is imperative that actual arrivals of commercial floating cranes match scheduled arrivals. Notify the Shipyard Port Services Office/Command Duty Officer (CDO)/Shipyard Watch Officer (SWO) of the contractor's entry into the Shipyard [NBK Bremerton site]. If the crane is not scheduled, its appearance is not considered legitimate for security reasons. All scheduled commercial floating cranes must be reported to the Shipyard Port Services Officer 3 working days in advance of the scheduled arrival.

5.2.8.4 The contracting officer shall notify the Lifting and Handling Department of any WHE accidents upon notification by the contractor. The contracting officer shall notify Code 106 and the Navy Crane Center (Code 07) via the Lifting and Handling Department of an accident involving a fatality, in-patient hospitalization, overturned crane, collapsed boom, or any other major damage to the crane, load, or adjacent property. Notifications to the Navy Crane Center shall be as soon as possible, but not later than 24 hours after the accident. For all other accidents, notify the Navy Crane Center as soon as practical but no later than three working days after the accident. If notification is by fax or e-mail, provide a point of contact for additional information. The contracting officer shall provide the Navy Crane Center and Lifting and Handling Department, Code 700, a copy of every accident report, regardless of severity, upon receipt from the contractor. These requirements are in addition to any notification and reporting requirements promulgated in reference 3.7 and command instructions.

5.2.9 When the contracting office is not in the local area, the contracting officer shall designate a local representative to ensure compliance with the above noted requirements.

5.3 Security personnel assigned to Non-Sensitive Area (NSA) and/or Controlled Industrial Area (CIA) gate guard duty shall send primary and/or sub-contractor personnel attempting to enter the Shipyard [NBK Bremerton site] with a crane to the prearranged inspection site. *[The Truck Inspection Station Officer (or security guard at the prearranged entry point) shall log the entry of the crane and record the company's name, contracting agency, contracting officer, contract number, work location, and the crane's license number (or other unique identifying information in the case of multi-purpose machine, material handling equipment, construction equipment used to lift loads suspended by rigging gear). The security guard shall notify the respective contracting officer and Code 740.1 of the contractor's name, contract number, and intended crane destination. These steps are in addition to the normal entry procedures for contractors entering the NSA and CIA.]*

5.4 The Shipyard coordinator of ship arrivals shall ensure a copy of this instruction is included in all ship's arrival packages (availability and homeport).

5.5 Forms. All forms required by this instruction can be obtained through the Lifting and Handling Department.

*[5.6 Command Duty Officer (CDO), Shipyard Watch Officer (SYWO), and Shipyard Port Services Office*

*5.6.1 The CDO and SYWO shall spot check contractor crane operations during daily waterfront tours.*

*5.6.2 The CDO and SYWO shall immediately report observed safety discrepancies to Code 740.1 during normal day shift hours. Safety discrepancies observed during backshift and weekend hours of operation shall be reported to Code 740.1, by fax or e-mail.*

*5.6.3 The Port Services Office shall notify Code 740.1 when unscheduled cranes are found to have entered the Shipyard/NBK Bremerton site. Backshift, weekend, or holiday notification shall be via fax or e-mail.]*

**6. APPENDICES**

**6.1 Contractor Crane, Multi-Purpose Machine, Forklift, Construction Equipment, and Rigging Gear Requirements**

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## APPENDIX 6.1

### CONTRACTOR CRANE, MULTI-PURPOSE MACHINE, FORKLIFT, CONSTRUCTION EQUIPMENT, AND RIGGING GEAR REQUIREMENTS

6.1.1 The following is a list of requirements that contractors shall comply with for all contracts that may result in the use of a category 1 or 4 crane, multi-purpose machines, forklifts, construction equipment and rigging gear when used on Navy property to lift suspended loads. Non-compliance with the requirements of this instruction may result in denial of access, stopping of operations, or removal from shipyard/[NBK Bremerton site] property. *[For the purposes of this instruction, the term “crane” shall include multi-purpose machines, material handling equipment, construction equipment used to lift loads suspended by rigging gear, unless otherwise specified.]*

#### 6.1.2 References:

6.1.2.1 NAVFAC P-307, Management of Weight Handling Equipment

6.1.2.2 American Society of Mechanical Engineers (ASME) B30.3 (tower cranes), B30.5 (mobile cranes), B30.8 (floating cranes), B30.9 (slings), B30.20 (below the hook lifting devices), and B30.22 (articulating booms), B30.26 (rigging hardware); ANSI/ITSDF B56.6 (rough terrain forklifts); Safety Standards for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings,

6.1.2.3 CFR, Title 29, Chapter XVII, Part 1917, Marine Terminals.

6.1.2.4 CFR, Title 29, Chapter XVII, Part 1926, Safety and Health Regulations for Construction

6.1.2.5 CFR, Title 29, Chapter XVII, Part 1915, Occupational Safety and Health Standards for Shipyard Employment

6.1.2.6 OPNAVINST 5100.23, Navy Safety and Occupational Health Program Manual

6.1.2.7 EM 385-1-1, Safety and Health Requirements Manual, U.S. Army Corps of Engineers

6.1.2.8 NAVFAC Guide Specification NFGS-01525D, Safety Requirements

6.1.3 These requirements are solely intended to provide for the protection of Government property and personnel and are not intended to, and do not, in any manner whatsoever, relieve the contractor of its responsibility, including, without limitation, its responsibility for the protection of its equipment and personnel.

6.1.4 Notification Requirement. Contractor shall notify the contracting officer in advance of the intent of bringing a non-Navy owned crane onto Shipyard *[NBK Bremerton site]* property (allows contracting officer to notify shipyard 3 days in advance of entry), or of any multi-purpose machines, material handling equipment, or construction equipment that may be used in a crane-like application to lift suspended loads. The contractor shall also specify when crane entry onto Shipyard *[NBK Bremerton site]* property is scheduled during back shift, weekend, or holiday hours of operation. All entries shall be through a prearranged entry point. The following documentation shall be provided along with notification: *[documentation from the crane manufacturer showing maximum outrigger load and maximum axle loads of the crane(s),]* a copy of the Certification of Compliance (reference 6.1.2.1) and objective evidence of operator qualifications for cranes with rated capacities of 2,000 lbs. or greater. *[Objective evidence of operator qualifications from a source that qualifies crane operators (i.e., a union, a government agency, or an organization that tests and qualifies crane operators) is not required for multi-purpose machines, material handling equipment, construction equipment used to lift loads suspended by rigging gear.]* Failure to schedule or provide necessary documentation may result in the crane being denied access to the facility.

6.1.5 The contractor shall comply with applicable reference 6.1.2.2 standards (e.g., B30.3 for construction tower cranes, B30.5 for mobile cranes, B30.8 for floating cranes, B30.9 for slings, B30.20 for below the hook lifting devices, and B30.22 for articulating boom cranes, B30.26 for rigging hardware, and ANSI/ITSDF B56.6 for rough terrain forklifts). Barge mounted mobile cranes require the following:

- third party certification from an OSHA accredited organization (or from a state accredited organization for those states with OSHA approved state plans). Third party certification is not required for barge-mounted mobile cranes at naval activities in foreign countries.
- a load indicating device, a wind-indicating device, and a marine type list and trim indicator readable in one-half degree increments.

6.1.6 Certification of Compliance (reference 6.1.2.1). The contractor shall complete a certificate of compliance that the crane (or other machine if used to lift suspended loads) and rigging gear meet applicable OSHA and ANSI/ASME regulations (with the contractor citing which OSHA regulations are applicable, e.g., cranes/multi-purpose machines used in cargo transfer shall comply with reference 6.1.2.3; cranes/multi-purpose machines used in construction, demolition, or maintenance shall comply with reference 6.1.2.4; cranes/multi-purpose machines used in ship repair shall comply with reference 6.1.2.5; slings shall comply with ASME B30.9, rigging hardware shall comply with ASME B30.26). For cranes (or other machines used to lift suspended loads) and rigging equipment at naval activities in foreign countries, the contractor shall certify that the crane (or other machine) and the rigging equipment conform to the appropriate host country safety standards. The contractor shall also certify that all of its crane (or other machine) operators working on the naval activity have been trained not to bypass safety devices (e.g., anti-two block devices) during lifting operations, and that its operators,

riggers and company officials are aware of the actions required in the event of an accident as specified in the contract. The contractor shall post certifications on the crane. When a crane on shipyard *[NBK Bremerton site]* property is not authorized for use, the Certification of Compliance shall state, "Operation of this Crane is NOT Authorized."

6.1.7 The contractor shall certify (reference 6.1.2.1) that the crane or machine operator is qualified and trained for the operation of the crane to be used. For mobile and commercial truck mounted cranes with OEM rated capacities of greater than 2,000 pounds, the crane operator shall be designated as qualified by a source that qualifies crane operators (i.e., a union, a government agency, or an organization that tests and qualifies crane operators) *[Objective evidence of operator qualifications from a source that qualifies crane operators (i.e., a union, a government agency, or an organization that tests and qualifies crane operators) is not required for multi-purpose machines, material handling equipment, construction equipment used to lift loads suspended by rigging gear.]*. Operators of cranes used in construction at activities covered by this instruction shall follow the qualification and certification requirements of 29 CFR 1926.1427. The contractor shall certify that signal persons used in construction work are qualified in accordance with 29 CFR 1926.1428. Proof of current qualification shall be provided.

6.1.8 For multi-purpose machines, material handling equipment, and construction equipment used to lift loads suspended by rigging equipment, the contractor shall have proof of authorization from the machine OEM that the machine is capable of making lifts of loads suspended by rigging equipment. The contractor shall demonstrate that the equipment is properly configured to make such lifts and is equipped with a load chart.

6.1.9 All hooks used on cranes, hoists, other machines, and rigging gear shall have self-closing latches or the throat opening shall be "moused" (secured with wire, rope, heavy tape, etc.) or otherwise secured to prevent the attached item from coming free of the hook under a slack condition. The following exceptions apply and shall be approved by the contractor's technical organization: items where the hook throat is fully obstructed and not available for manual securing and lifts where securing the hook throat increases the danger to personnel such as forge shop, dip tank, or underwater work.

#### 6.1.10 Loading Limitations.

CAUTION: Piers and waterfront areas such as along dry docks and quay walls may have load restrictions.

6.1.10.1 The contractor shall notify the contracting officer prior to moving a crane on a pier, dry dock, or other waterfront area. The contractor shall provide the contracting officer with the crane make, model, and configuration in which it is to be used. *[Configuration information shall include the maximum axle loads in a travel configuration and the maximum outrigger loads in the configuration in which the crane will provide lift(s)].*

6.1.10.2 The contractor shall comply with crane access routes and load limitations issued with the contract.

6.1.11 Prior to making any critical lift, the contractor shall provide a critical lift plan *[to the contracting officer]* for each of the following lifts: lifts over 75 percent of the capacity of the crane, hoist, or other machine (50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane, hoist, or other machine; lifts of personnel (lifts of personnel suspended by rigging equipment from multi-purpose machines, material handling equipment, or construction equipment shall not be permitted); lifts made in the vicinity of overhead power lines; erection of cranes; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. The plan shall include the following as applicable:

6.1.11.1 The size and weight of the load to be lifted, including crane (or other machine) and rigging equipment that add to the weight. The OEM's maximum load capacities for the entire range of the lift shall also be provided.

6.1.11.2 The lift geometry, including the crane (or other machine) position, boom length and angle, height of lift, and radius for the entire range of the lift. Applies to both single and tandem crane/machine lifts.

6.1.11.3 A rigging plan, showing the lift points, rigging equipment, and rigging procedures.

6.1.11.4 The environmental conditions under which lift operations are to be stopped.

6.1.11.5 For lifts of personnel, the plan shall demonstrate compliance with the requirements of 29 CFR 1926.1431.

6.1.11.6 For barge mounted mobile cranes, barge stability calculations identifying crane placement/footprint; barge list and trim based on anticipated loading; and load charts based on calculated list and trim specific to the barge the crane is mounted on. The amount of list and trim shall be within the crane manufacturer's requirements.

6.1.11.7 For lifts in the vicinity of overhead power lines (i.e., if any part of the crane or other machine, including the fully extended boom of a telescoping boom crane or machine, or the load could approach the distances noted in figure 10-3 of reference 6.1.2.1 during a proposed operation), the plan shall demonstrate compliance to 29 CFR 1926.1408 - 1411.

6.1.12 Contractor provided tower cranes used in construction must meet the additional requirements of CFR 1926.1435. The following additional documentation is required for contractor provided tower cranes (those cranes defined by ASME B30.3).

6.1.12.1 Foundation design and requirements.

6.1.12.2 Installation instructions.

6.1.12.3 Assembly and disassembly instructions including climbing/jumping instructions if applicable.

6.1.12.4 Operating manual, limitations, and precautions.

6.1.12.5 Periodic inspection and maintenance requirements.

6.1.13 Crane and Rigging Gear Accident Reporting and Record Keeping. Contractors operating cranes on Shipyard *[NBK Bremerton site]* property shall report all WHE accidents that occur incidental to an operation, project, or facility as prescribed by paragraphs (6.1.13.1) through (6.1.13.3) requirements below. Contractors shall report directly to their respective contracting officer. There are two general categories of accidents as defined below. Crane accidents are those that occur during operation of a crane. Rigging gear accidents are those that occur when gear is used by itself in weight handling operation i.e., without a crane. *[Refer to rigging accident definition and requirements for mishaps during the operation of multi-purpose machines, material handling equipment, construction equipment used to lift loads suspended by rigging gear.]*

6.1.13.1 Crane Accident: For the purpose of this definition, it is assumed there is an "operating envelope" around any crane, and inside the envelope are the following elements:

1. The crane
2. The operator
3. The rigger(s) and crane walker
4. Other personnel involved in the operation (supervisor, mechanic, tag line handler, engineer, etc.)
5. The rigging gear between the hook and the load
6. The load
7. The crane's supporting structure (ground, rail, etc.)
8. The lift procedure

6.1.13.1.1 Definition. 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 in lieu of these requirements.
2. Material or equipment damage
3. Dropped load
4. Derailment

5. Two-blocking
6. Overload (This includes load tests when the test load tolerance is exceeded.)
7. Collision, including unplanned contact between the load, crane, and/or other objects.

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.). Items 3, 4, 5, 6, and 7 are considered crane accidents even though no material damage or injury occurs.

Exception. If a crane is used as an anchor point for a portable hoist/rigging gear, a rigging gear accident as defined in paragraph 6.1.13.2 below is not considered a crane accident if the crane is not being operated (no functions are in motion) at the time of the rigging gear accident, unless the accident results in an overload or damage to the crane, in which case it shall be reported as a crane accident.

6.1.13.2 Rigging Gear Accidents: For the purpose of this definition, it is assumed there is an “operating envelope” around any weight handling operation, and inside the envelope are the following:

1. Rigging gear and miscellaneous equipment
2. The user of the gear or equipment.
3. Other personnel involved in the operation (supervisor, mechanic, tag line handler, engineer, etc.)
4. The load
5. The gear or equipment’s supporting structure
6. The load’s rigging path
7. The rigging procedure

6.1.13.2.1 Definition. A rigging gear accident occurs when any one or more of the elements in the operating envelope fails to perform correctly during weight handling operations 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 that requires the damaged item to be repaired because it can no longer perform its intended function. This does not include superficial damage such as scratched paint, damaged lagging, or normal wear on rigging gear.
3. Dropped load.
4. Two-blocking of cranes and powered hoists.
5. Overload. (This includes load tests when the test load tolerance is exceeded.)

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 load, damaged load, etc.). Items 3, 4, and 5 are considered accidents even though no material damage or injury occurs.

6.1.13.3 The contractor shall notify the contracting officer as soon as practical, but not later than four hours, after any WHE accident. The contractor shall secure the accident site and protect evidence until released by the contracting officer. The contractor shall conduct an accident investigation to establish the root cause(s) of the accident. Crane operations shall not proceed until cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer. The contractor shall provide the contracting officer within 30 days of any accident a Crane and Rigging Gear Accident Report using the form provided in reference 6.1.2.1 consisting of a summary of circumstances, an explanation of causes(s), photographs if available, and corrective actions taken. These notifications and reporting requirements are in addition to those promulgated by reference 6.1.2.6 and related claimant instructions.

6.1.14 Each contractor shall perform the following actions prior to conducting crane operations on Shipyard[[NBK Bremerton site](#)] property:

6.1.14.1 Inspection Requirements. It shall be the sole responsibility of the contractor to assure the contracting officer and/or designated Shipyard personnel that the crane and associated rigging gear are in good working order and safe for use.

6.1.14.1.1 Crane Inspection. Perform pre-operational inspection of the crane in the presence of a representative of the contracting office of the crane prior to starting work on Shipyard[[NBK Bremerton site](#)] property. Inspection shall meet all applicable reference 6.1.2.2, reference 6.1.2.7 (for NAVFAC construction contracts), and OSHA requirements.

6.1.14.1.2 Wire Rope Inspection. Perform a Wire Rope Inspection in the presence of a representative of the contracting office to applicable reference 6.1.2.2, reference 6.1.2.7 (for NAVFAC construction contracts), and OSHA requirements.

6.1.14.1.3 Rigging Gear Inspection. Perform a Rigging Gear Inspection in the presence of a representative of the contracting office to applicable reference 6.1.2.2, reference 6.1.2.7 (for NAVFAC construction contracts), and OSHA requirements.