

N62470-10-R-8006
APPENDIX E

1. SAFETY REGULATIONS. Work performed on Government property shall be in conformance with applicable Code of Federal Regulations (CFR); National Fire Protection Association (NFPA) 10, 70, and 241; State laws and the following:

1.1 The contractor shall comply with specific activity safety regulations contained in Section H of this contract.

1.2 The contractor shall comply with specific activity regulations pertaining to crane safety and operation (including allowable crane access routes and ground loading limitations). No vehicular loading (including mobile cranes or trucks) shall exceed the H20-S16 Highway Loading (the H20 indicating a maximum of 20 tons per truck or crane and the S16 indicating a maximum of 32,000 pounds per axle of semi-trailer) when transporting over activity roadways. The contractor shall allow spot checks of crane operations by the Contracting Officer. See site specific work requirements for building load limits.

1.3 Government safety and health inspectors, and any explicit or implicit approvals, do not relieve the contractor of an obligation to comply with all applicable safety regulations. The Government will investigate all complaints of unsafe or unhealthful working conditions received in writing from contractor employees, federal civilian employees, or military personnel.

1.4 The contractor shall secure the power to the new crane (if electrified) prior to exiting the worksite each day.

2. CRANES ENTERING GOVERNMENT PROPERTY. The contractor shall notify the Contracting Officer no less than 5 working days in advance of the intent to bring a contractor-operated crane onto Government property. The contractor shall notify the Contracting Officer when crane entry onto Government property is scheduled during back-shift, weekend, or holiday hours of operation. All entries shall be through a prearranged entry point (e.g., truck inspection station).

3. EQUIPMENT MANUFACTURER'S SPECIFICATIONS. The contractor shall comply with the manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Erection of a crane(s) used to assemble the crane under this contract shall be performed under the supervision of a person experienced in erection and operation of these crane(s). All testing shall be performed in accordance with manufacturer's recommended procedures.

4. PERSONAL PROTECTIVE EQUIPMENT (PPE). All contractor employees shall wear the appropriate PPE (e.g. protective footwear, protective gloves, hard hats/hard caps, safety glasses, hearing protection, body harnesses and lanyards) when on the Government job-site. All construction/crane erection areas are considered hard hat areas. The identification and analysis of personnel hazards shall be documented in the accident prevention plan and activity hazard analysis.

5. EQUIPMENT USAGE. Only equipment and/or vehicles designed to perform the intended work are authorized for use by contractor personnel. Contractor cranes being operated on Government property shall comply with the requirements contained in the "Mobile Cranes and Articulating Boom Cranes" paragraph in this section.

6. AUDITS OF OPERATIONS AND EQUIPMENT. The Government reserves the right to perform audits to ensure contractor operations and equipment brought onto Government property conforms to the requirements of the contract.

6.1 The contractor shall provide the following documentation to the Contracting Officer at least 2 working days prior to bringing a contractor-operated crane onto Government property:

- a. Certificate of Compliance. Contractor cranes being operated on Government property shall have a completed certificate of compliance (Enclosure (1)) posted in a conspicuous place on or in the cab of the crane/vehicle to which it pertains. The certificate of compliance shall state that the crane meets all applicable 29 CFR 1926 regulations. The certificate of compliance shall remain posted on the crane while the crane is on Government property.
- b. Crane Records. Cranes used by a contractor shall have in the cab of the crane a "summary sheet" of all pertinent documentation, such as inspection records; crane manufacturer operating manual, including crane equipped operator aids; crane log book that records operating hours; and all crane inspections, tests, maintenance, and repair records. The crane records referenced in the "summary sheet" shall be located at the contractor's job-site office. A copy of the crane's load rating chart shall be located in the cab.
- c. Rigging Certification. Provide written certification that the contractor provided rigging gear used at the job-site meets all applicable 29 CFR 1926 regulations.
- d. Crane Operator Qualification Documentation. The contractor shall certify that contractor personnel operating cranes on

Government property are qualified and trained to operate the crane to be used, are qualified to perform the assigned work, and have passed a practical operating examination for the specific type of crane being operated. The contractor shall also certify that all of its crane operators have been trained not to bypass safety devices (e.g., anti-two-block devices) during lifting operations.

7. CONTRACTOR MISHAP (ACCIDENT) INVESTIGATION AND REPORTING.

7.1 *Definition.* The contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies or equipment. In addition to the following the requirements as outlined below, the contractor shall comply with OSHA's accident reporting requirements.

7.2 Mishaps involving contractor equipment or contractor personnel on Government property:

- a. The contractor shall notify the Contracting Officer as soon as practical, but not later than 4 hours, when contractor operations cause a mishap that results in:
 - (1) a fatality, the hospitalization of three or more personnel, or property damage in excess of \$200,000. Communication shall be reported via live voice with fax or e-mail follow-up within specified period.
 - (2) any incident involving weight handling equipment (WHE) owned, leased and/or operated by a contractor on Government property. Communication shall be reported via live voice, fax, or e-mail within the specified period. The definitions for a WHE equipment accident (crane accident or a rigging gear accident) are found in paragraphs 7.2.e. (2) and 7.2.f (2) below.
- b. The contractor shall submit the following reports as applicable to the Contracting Officer:
 - (1) Any contractor mishap described in paragraph a.(1) shall be investigated by the contractor and a Contractor Significant Incident Report (CSIR) form filled out and submitted to the Contracting Officer within 24 hours for the initial report and 5 days for the final report. The CSIR form can be obtained from the Contracting Officer. A separate CSIR form shall be completed for each person who was injured, caused, or contributed to the accident (excluding uninjured personnel and witnesses).
 - (2) For any contractor reportable incident described in paragraph a.(2), the contractor shall provide the Contracting Officer a Crane and Rigging Gear Accident Report ((form is shown in Enclosure (2) of this section)) within 30 days, consisting of a summary of circumstances, an explanation of causes(s), photographs (if cameras are prohibited on the Navy Activity, the contractor shall request the Navy Activity take the photographs), and corrective actions taken.
 - (3) Any Contractor occupational injury or illness that results in an OSHA reportable mishap, property damage in excess of \$2,000 (This amount is for record purposes only. GOV is not required to enter property damage reports into the FAIR database if less than \$10,000.) shall be investigated by the contractor and a Contractor Significant Incident Report (CSIR) form filled out and submitted to the Contracting Officer within 30 days. The CSIR form can be obtained from the Contracting Officer. A separate CSIR form shall be completed for each person who was injured, caused, or contributed to the accident (excluding uninjured personnel and witnesses).
- c. The contractor shall notify the Contracting Officer within 24 hours when contractor operations cause a mishap that results in a lost workday.
- d. If the contractor experiences a mishap described in paragraphs a.(1) and a.(2) above, the contractor shall take the following actions:
 - (1) Review the situation and take any further emergency action, including stopping production work or other operations that could aggravate the situation. If the mishap involves WHE or there is evidence of damage (suspected accident) to WHE, the Contractor shall stop operations, secure power, and ensure the WHE is safely secured from operation. If there is impending danger to the WHE or personnel, place the WHE and load in a safe position prior to securing the WHE.
 - (2) The contractor shall take action to have the accident scene secured until a mishap investigation is completed. The accident scene shall not be disturbed or equipment released prior to Contracting Officer approval.
 - (3) The contractor is responsible for performing the mishap investigation with assistance of the Contracting Officer's appointed representative. The contractor shall conduct an accident investigation to establish the root cause(s) of the accident. Operations shall not proceed until cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer.
- e. Definition of a crane accident.

(1) For cranes, it is assumed there is an "operating envelope" around any crane, and inside the envelope are the following elements:

- (a) The crane.
- (b) The operator.
- (c) The rigger(s) and crane walker.
- (d) Other personnel involved in the operation (supervisor, mechanic, tag line handler, engineer, etc.).
- (e) The rigging gear between the hook and the load.
- (f) The load.
- (g) The crane's supporting structure (ground, rail, etc.).
- (h) The lift procedure.

(2) 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:

- (a) Personnel injury or death.
- (b) Material or equipment damage.
- (c) Dropped load.
- (d) Derailment.
- (e) Two-blocking.
- (f) Overload.
- (g) Collision, including unplanned contact between the load, crane, and/or other objects.

Items (c) through (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.).

f. Definition of a rigging gear accident.

(1) 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:

- (a) Rigging gear
- (b) The user of the gear
- (c) Other personnel involved with the operation (supervisor, mechanic, tag line handler, etc.)
- (d) The load
- (e) The gears supporting structure
- (f) The load's rigging path
- (g) The rigging procedure

(2) A rigging gear accident occurs when any of the elements in the operation envelope fails to perform correctly during weight handling operations resulting in the following:

- (a) Personnel injury or death
- (b) Material equipment damage
- (c) Dropped load
- (d) Two blocking of cranes or powered hoists
- (e) Overload

Items (c) through (e) 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.).

8. ACCIDENT PREVENTION PLAN (APP). Prior to performing any work on a Government job-site, the contractor shall provide an Accident Prevention Plan.

8.1 The APP shall be prepared in accordance with the Army Corps of Engineers EM 385-1-1, "Safety and Health Requirements" as applicable, the APP shall be site specific and as a minimum, contain the following analyses and plans:

a. Emergency Response Plan

- b. Activity Hazard Analysis
- c. Critical Lift Plan
- d. Hazard Communication Plan
- e. Hazardous Energy Control Plan
- f. Fall Protection and Prevention Plan
- g. Fire Protection and Prevention Plan
- h. Severe Weather Plan (if outside work is involved)
- i. Emergency Lighting Plan (may incorporate building emergency lighting plan)
- j. Work Site Lighting Plan
- k. Drug and Alcohol Prevention Plan
- l. Site Sanitation Plan
- m. Mobile Cranes and Articulating Boom Cranes (if this equipment is being used)
- n. Jacking Operations Plan (if applicable)
- o. Asbestos Hazard Abatement Plan (if applicable)
- p. Material Containing Lead Removal Plan (if applicable)

8.2 The APP shall provide identification and accountability of personnel responsible for accident prevention. The APP shall be signed by the plan preparer, the plan approver, and to show concurrence signed by an officer of the contractor's firm, the contractor's on-site safety representative, the contractor's project manager, the contractor's superintendent, and representatives of the subcontractors.

8.3 Prior to site mobilization the prime contractor and subcontractors shall meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

8.4 The contractor will not be allowed to commence work on site until the APP is determined to be acceptable by NAVCRANECEN. The APP shall be kept at the Government job-site and made available for employee review.

9. EMERGENCY RESPONSE PLAN.

9.1 An emergency response plan shall be prepared by the contractor and submitted as part of the Accident Prevention Plan (APP). The emergency response plan shall contain the following procedure, duties, maps, names and plans:

- a. Emergency escape procedure and emergency escape route assignments including a predetermined assembly meeting area after an evacuation.
- b. Emergency rescue procedures (e.g. for employees working at heights or in confined spaces).
- c. Rescue and medical duties for those employees who are to perform them.
- d. The preferred means of reporting fires and other emergencies (e.g. location of phones at the job site, and the posting of emergency telephone numbers and reporting instructions for ambulance, physician, hospital, fire, and police).
- e. Sketch or map that will be posted at the job-site highlighting the route to the nearest medical facility and hospital.
- f. Names and job title of persons who can be contacted for further information of duties under the accident prevention plan.
- g. Spill containment plan to contain and isolate the entire volume of a spilled hazard substance.
- h. Person overboard plan for work over or immediately adjacent to water, including the wearing of U.S. Coast guard approved life jackets and the immediate availability of a skiff, and a person trained in operating it.

10. ACTIVITY HAZARD ANALYSIS

10.1 *Definitions.*

- a. *Activity hazard analysis:* a documented process by which the steps (procedures) required to accomplish a work activity are outlined, the actual or potential hazards of each step are identified and measures for the elimination or control of those hazards are developed.
- b. *Competent person:* one who can identify existing and predictable hazards in the working environment or working conditions that are dangerous to personnel and who has authorization to take prompt corrective measures to eliminate them.

10.2 An Activity Hazard Analyses shall be prepared by a competent person as defined in the paragraph above for all non-routine phases of work and hazardous activities, and for work requiring additional or unusual safety precautions that will be performed under this contract on the Government job site. This Activity Hazard Analysis shall be submitted as part of the Accident Prevention Plan (APP).

- a. Analyses will define the activities being performed and identify the sequences of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level.
- b. Work shall not begin on a work activity until the hazard analysis for the work activity has been accepted by the Contracting Officer and discussed with all engaged in the activity including the contractor, subcontractor(s), crane operator and riggers (if involving a lift), and the Contracting Officer's on-site representative.

11. CRITICAL LIFT PLAN

11.1 *Definition.* Critical lifts are all lifts of major crane components (i.e., end truck, girders, trolleys, etc.) that require detailed planning or special safety precautions, and include lifts which require the load to be lifted, swung, or placed out of the operator's view; lifts of bridge crane structures where there is only a few inches of clearance between the load being lifted and the building roof beams, joists, purlins, and/or elevated building equipment; lifts made with more than one crane or hoist; lifts involving technically difficult rigging arrangement; hoisting personnel with a crane or derrick; any lifts exceeding 75% of the rated capacity of the crane(s) or hoist (lifts over 50% of the capacity of a barge mounted mobile crane's hoist) at any radius of lift, lifts of personnel, lifts involving unusual safety risks, lifts of sensitive equipment, or any lift which the crane operator believes should be considered critical.

11.2 Critical lifts require additional job planning (a critical lift plan) to ensure the safety of equipment and personnel. A critical lift plan shall be prepared by the contractor. Critical lift plans shall be developed, reviewed, and signed by all personnel involved in the lift and shall:

- a. Specify the exact size and weight of the load to be lifted and all crane and rigging components which add to the weight.
- b. Specify the manufacturer's maximum load limits for the entire range of the lift as listed in the load charts.
- c. Specify the lift geometry and procedures, including the crane position, , the center of gravity of the load, height of the lift, the load radius, and the boom length and angle, for the entire range of the lift.
- d. Designate the crane operator, lift supervisor and rigger and state their qualifications.
- e. Include a rigging plan, which shows the lift points and describes rigging procedures and gear requirements.
- f. Describe the ground condition and outrigger or crawler track requirements (and, if necessary, the design of mats) needed to achieve a level, stable foundation of sufficient bearing capacity for the lift.
- g. For floating cranes or derricks describe the operating base (platform) condition (for mobile cranes mounted on barges) and any potential list. For barge mounted mobile cranes provide barge stability calculations identifying list and trim based on anticipated loading; and charts based on calculated list and trim. The amount of list and trim shall be within the manufacturer's requirements.
- h. List of environmental conditions under which lift operations are to be stopped.
- i. Specify coordination and communication requirements for the lift operation.
- j. For tandem or tailing crane lifts, specify the make and model of the cranes, the line, boom, and swing speeds, and the requirements for an equalizer beam.
- k. For lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.550(g).

12. HAZARD COMMUNICATION PLAN

12.1 *Definition.* A hazard communication plan is a written plan for protecting personnel and property during the transport, storage and use of hazardous materials.

12.2 A hazard communication plan shall be prepared by a competent person as defined in the Activity Hazard Analysis paragraph, shall be submitted as part of the Accident Prevention Plan (APP), and shall state address:

- a. Items required by 29 CFR 1926.59(e).
- b. Emergency procedures for spill response and disposal of hazardous materials.
- c. Hazardous Material Exclusions. That notwithstanding any other hazardous material used in this contract, the following materials are prohibited within the limits of the Government job-site or activity following (exceptions to the use of any of these excluded materials may be considered by the Contracting Officer upon written request by the Contractor):
 - (1) radioactive materials or instruments capable of producing ionizing/nonionizing radiation.
 - (2) mercury, mercury compounds, and components containing mercury or mercury compounds. Fluorescent and mercury vapor lamps contain mercury and the breakage of a lamp containing mercury within a naval activity constitutes a mercury spill and must be reported to the activity's Mercury Control Coordinator.
 - (3) asbestos or materials which contain asbestos.
 - (4) materials which contain polychlorinated biphenyls or di-isocyanates.

- (5) lead-based paints.
- d. Yellow Plastic Exclusion. That yellow packaging materials are not permitted on naval activities. Yellow colored materials are used by activities to contain and/or identify material. Loose yellow colored material, especially plastic, is a potential incident which results in considerable lost production time.
- e. Construction equipment, including cranes, regardless of location, shall have adequate oil absorbent material staged at the crane to contain a hydraulic component/system failure/leak. Contractors are responsible to clean up non-emergency oil and hazardous substance spills from their equipment. (The contractor shall notify the Contracting Officers designated representative when setting up a crane for HAZMAT conditions.)
- f. Labeling system to identify contents on all containers on-site.
- g. Current inventory of hazardous chemical on site.
- h. Location and use of Material Safety Data Sheets (MSDS) and that:
 - (1) a MSDS for each hazardous substance at the Government job site will be maintained in an inventory, provided to the Contracting Officer, and made available to all potentially exposed employees.
 - (2) for emergency response purposes, each entry in the inventory shall include the approximate quantities (e.g. liters, kilograms, gallons, pounds) that will be on site at any given time.
 - (3) a site map will be attached to the inventory showing where inventoried hazardous substances are stored.
 - (4) the inventory and the site map shall be updated as frequently as necessary to ensure accuracy.
- i. Training (to include potential safety and health effects from exposure to hazardous substances).
- j. The notification process when hazardous substances are brought onto the Government job site and that all employees potentially exposed to the substance will be advised of information in the MSDS for the substance.

13. HAZARDOUS ENERGY CONTROL PLAN.

13.1 *Definition.* An OSHA compliant Energy Control Program provides the procedures and methods for the control of hazardous energy during the installation, maintenance and inspection of all equipment where the unexpected energization or movement of this machinery could result in a release of energy which might cause injury to personnel and/or property damage.

13.2 A hazardous energy control plan shall be prepared by a competent person (as defined in the Activity Hazard Analysis paragraph), shall be submitted as part of the Accident Prevention Plan (APP), and shall describe specific energy control requirements and lockout/tagout procedures for the equipment being installed, inspected and/or maintained in accordance with an established OSHA compliant energy control program.

13.3 The contractor shall comply with 29 CFR 1910.147 "The control of hazardous energy (lockout/tagout)" and 29 CFR 1910.333 "selection and use of work practices" when on activity property. The contractor "may" use OSHA Standard STD 1-7.3 "Control of Hazardous (Lockout/Tagout) - Inspection Procedures and Interpretive Guidance" as a guide on procedures to follow in the control of hazardous energy when on the job-site.

13.4 The contractor shall use the colors designated by the activity for the "locks" used in lockout/tagout for the respective energy sources when on activity property.

13.5 Lockout/tagout tags are "danger tags" and shall comply with the colors required by 29 CFR 1926.200(b) "Danger signs shall have red as the predominating color ...".

14. FALL PROTECTION AND PREVENTION PLAN

14.1 *Definitions.*

- a. *Fall Protection and Prevention Plan:* a fall protection and prevention plan is a document prepared by a contractor or subcontractor for the purpose of planning, designing, installing, monitoring and rescue of workers exposed to fall hazards and prevent fall accidents from occurring on Government property during work performed under this contract.
- b. *Competent Person for Fall Protection:* a person knowledgeable of fall protection equipment, including the manufacturer recommendations and instructions for the proper use, inspection, and maintenance; who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as in their application and use with related equipment; who is knowledgeable of rules and regulations regarding the erection of fall protection equipment and systems, AND who has the authority to take prompt correct measures to eliminate the hazards of falling.
- c. *Qualified Person for Fall Protection:* a person is one with a recognized engineering degree or professional certificate, and with extensive knowledge, training, and experience in the subject field of fall protection; who is

capable of performing design, analysis, and evaluation of fall protection systems and equipment.

14.2 A fall protection and prevention plan shall be written by a competent person (as defined in the definitions paragraph above), shall be submitted as part of the Accident Prevention Plan (APP), and shall include the following:

- a. Description of the fall hazards at the job site.
- b. Type of fall protection/prevention methods or systems to be used.
- c. Training requirements for employees exposed to fall hazards.
- d. Type of fall protection equipment and systems provided to the employees that might be exposed to fall hazards.
- e. Identify the tie-off points (anchorage) to be used for attachment of personal fall arrest equipment that are capable of supporting at least 5,000 pounds per employee attached, or have been designed, installed, and used as follows:
 - (1) as part of a complete personal fall arrest system which maintains a safety factor of at least two; and
 - (2) under the supervision of a qualified person (as defined in the definitions paragraph above).

If there is a need to devise an anchor point from existing structures such as beams, or eye-bolt, a qualified person shall be used to evaluate the anchorages.

15. FIRE PROTECTION AND PREVENTION PLAN

15.1 *Definition.* A fire protection and prevention plan is a plan prepared by the contractor covering the items described in NFPA 241 including fire prevention (e.g. fire watch) during hot work (e.g. welding/grinding).

15.2. A fire protection and prevention plan shall be prepared by a competent person (as defined in the Activity Hazard Analysis paragraph), shall be submitted as part of the Accident Prevention Plan (APP), and shall state that welding, burning, and open flame work will only be performed on the Government job-site when:

- a. the methods have been approved by the activity (cognizant Safety Office) where the job-site is located,
- b. the activity where the job-site is located has been notified that hot work is going to be performed, when it is going to be performed, and the number of days needed,
- c. a fire watch is provided by the contractor,
- d. an adequate fire extinguishing equipment is available, AND,
- e. fuel bottles are placed by the contractor at ground level and outside of the hot work area.

16. SEVERE WEATHER PLAN (if outside work is involved).

16.1 *Definition.* A severe weather plan lists procedures for ceasing on-site outdoor operations during lightning, high winds, and restricting operations during reduced visibility or icing.

16.2 The contractor shall prepare a severe weather plan and submitted with the APP that list procedures followed during severe weather. State in this plan that cranes shall not be operated when wind speeds at the top of the crane approach the maximum wind velocity recommendations of the manufacturer, that operations undertaken during weather conditions that produce icing of the crane structure or reduced visibility shall be performed at reduced functional speeds and with signaling means appropriate to the situation, and when conditions are such that lightning could occur, all crane operations shall cease.

17. EMERGENCY LIGHTING PLAN.

17.1 *Definition.* Emergency lighting facilities for means of egress are described in NFPA 101-2000 Life Safety Code (National Consensus Standards). Exit access include only designated stairs, walkways, ramps, runways and passageways leading to an exit. Emergency illumination is required for not less than 1-1/2 hours in the event of failure of normal lighting. Emergency lighting facilities must provide initial illumination that is not less than an average of 1 ft-candle (10 lux) and, at any point, not less than 0.1 ft-candle (1 lux), measured along the path of egress at floor level.

17.2 An emergency lighting plan shall be prepared by the contractor and shall be submitted as part of the APP.

17.3 If the on-site work is being performed in a building that has emergency lighting facilities that provides adequate illumination of the egress routes from the contractor work areas during a power failure then the building's emergency lighting plan may be used for this submission.

18. WORK SITE LIGHTING PLAN.

18.1 *Definition.* Absolute minimum illuminances at any time and location where safety is related to visibility are described in IESNA Lighting RR-96 (Illuminating Engineering Society of North America). Luminance levels for safety: Normal Level slight

hazards requiring visual detection: 0.5 Footcandles (5.4 Lux).

18.2 A work site operations lighting plan shall be prepared by the contractor and shall be submitted as part of the APP to assure that adequate illumination is provided in the work areas within a crane, within a building, and during nighttime operations.

19. DRUG AND ALCOHOL PREVENTION PLAN.

19.1 Definition. Drug abuse is a potential health, safety and security problem. Illegal drugs, prescription drugs and alcohol can cause adverse side effects that may affect workplace safety (e.g. drowsiness or impaired reflexes or reaction time).

19.2 A drug and alcohol prevention plan shall be prepared by the contractor and shall be submitted as part of the APP that enforces a restriction against the use of illegal drugs or the consumption of alcohol at any time at the job-site, and enforces a prohibition that employees shall not work at the job-site while under the influence of alcohol or drugs, including prescription drugs that have adverse side effects that may affect workplace safety.

20. SITE SANITATION PLAN.

20.1 A site sanitation plan shall be prepared by the contractor and shall be submitted as part of the APP that shall map out the provisions for supplying adequate drinking water, toilet facilities, washing facilities and waste disposal, and steps taken to ensure all debris is kept cleared from work areas, passageways and stairs, in and around work structures.

20.2. If the Government is furnishing drinking water, toilet facilities and washing facilities to the contractor, indicate this in the site sanitation plan.

21. MOBILE CRANES AND ARTICULATING BOOM CRANES (if this equipment is being used).

21.1 Comply with ASME B30.5 for mobile cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes.

21.2 For mobile cranes with original equipment manufacturer's (OEM) rated capacities of 50,000 pounds or greater, the crane operator needs to 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). The contractor shall provide to the Contracting Officer proof of current qualifications as per contract data requirements list (CDRL) "Crane Operator's Qualification" contained in this contract.

21.3 The Accident Prevention Plan shall indicate that in addition to the requirements of 29 CFR 1926, mobile cranes will be equipped with:

- a. An anti-two-block device or a two-block damage prevention feature for all points of two-blocking.
- b. A boom angle indicator or radius indicator readable from the operator's station.
- c. A boom hoist disconnect, shutoff, or hydraulic relief to automatically stop the boom hoist when the boom reaches a predetermined high angle.
- d. For telescoping booms:] A boom length indicator readable from the operator's station.
- e. For telescoping booms:] An integrally mounted holding device (such as a load hold check valve) provided with the telescopic hydraulic cylinder(s) to prevent uncontrolled retraction of the boom in the event of a hydraulic system failure (e.g., supply hose).
- f. For telescoping booms:] An integrally mounted holding device (such as a load hold check valve) provided with boom support hydraulic cylinder(s) to prevent uncontrolled lowering of the boom in the event of a hydraulic system failure (e.g., supply hose).

21.4 For night operations, lighting shall be adequate to illuminate the working areas while not interfering with the operator's vision.

21.5 Each load shall be rigged/attached independently to the hook/master-link in such a fashion that the load cannot slide or otherwise become detached. The practice of "Christmas tree lifting" steel is prohibited. Long slender objects (e.g. steel beams, pipe, bars) shall be rigged to be lifted horizontally using two independent choker or eyebolt type pick-up points in such a fashion that the load cannot slide or otherwise become detached, taking into account the sling angle to the load in determining sling loadings.

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

- a. Notify the Contracting Officer prior to moving a crane onto a pier, dry dock, or other waterfront area. Provide the Contracting Officer with the crane make, model, and configuration in which it is to be used.

- b. The contractor shall comply with cribbing requirements issued with the contract.
- c. Fueling and equipment maintenance is prohibited on piers and other over water sites.

22. JACKING OPERATIONS PLAN (if applicable).

22.1 *Definition.* Jacking operations shall be designed and planned by a registered professional engineer who has experience in jacking systems. A jacking operation plan shall be implemented by the contractor and shall include detailed instructions and sketches indicating the prescribed method of erection or disassembly. These plans and designs shall include provisions for ensuring lateral stability of the ground or pier area during the lifting of the crane onto the crane rails.

22.2 A jacking operations plan shall discuss the following:

- a. Jacks/lifting units shall be marked to indicate their rated capacity as established by the manufacturer. The rated load shall be legibly and permanently marked in a prominent location on the jack by casting, stamping, or other suitable means.
- b. Jacks/lifting units shall not be loaded beyond their rated capacity as established by the manufacturer.
- c. The operator shall make sure that the jack used has a rating sufficient to lift and sustain the load. Jacking equipment shall be capable of supporting at least two and one-half times the load being lifted during jacking operations and the equipment shall not be overloaded. For the purpose of this provision, jacking equipment includes any load bearing component, which is used to carry out the lifting operation(s). Such equipment includes, but is not limited, to the following: threaded rods, lifting attachments, lifting nuts, hook-up collars, T-caps, shearheads, columns, and footings.
- d. Equipment shall be designed and installed so that the lifting rods cannot slip out of position or the contractor shall institute other measures, such as the use of locking or blocking devices, which will provide positive connection between the lifting rods and attachments and will prevent components from disengaging during lifting operations. In the absence of a firm foundation, the base of the jack shall be blocked. If there is a possibility of slippage of the cap, a block shall be placed in between the cap and the load.
- e. Jacks/lifting units shall be designed and installed so that they will neither lift nor continue to lift when they are loaded in excess of their rated capacity.
- f. Jacks/lifting units shall have a safety device installed which will cause the jacks/lifting units to support the load in any position in the event any jack lifting unit malfunctions or loses its lifting ability.
- g. Jacking operations shall be synchronized in such a manner to ensure even and uniform lifting of the load. During lifting, all points at which the load is supported shall be kept within 1/2 inch of that needed to maintain the load in a level position. The operator shall watch the stop indicator, which shall be kept clean, in order to determine the limit of travel. The indicated limit shall not be overrun.
- h. If leveling is automatically controlled, a device shall be installed that will stop the operation when the 1/2 inch tolerance set forth in paragraph g above is exceeded or where there is a malfunction in the jacking (lifting) system.
- i. If leveling is maintained by manual controls, such controls shall be located in a central location and attended by a competent person while lifting is in progress. The competent person must be experienced in the lifting operation and with the lifting equipment being used. A "competent person" is defined as one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
- j. After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once.
- k. The maximum number of annually controlled jacks/lifting units on the load shall be limited to a number that will permit the operator to maintain the load level within specified tolerances of paragraph g above, but in no case shall that number exceed fourteen.
- l. Under no circumstances, shall any employee who is not essential to the jacking operation be permitted immediately beneath the load while it is being lifted.
- m. Jacks/lifting units shall be positively secured so that they do not become dislodged or dislocated.
- n. Each jack shall be thoroughly inspected at times which depend upon the service conditions. Inspections shall be not less frequent than the following: (a) for constant or intermittent use, once every 6 months, (b) for jacks sent out of shop for special work, when sent out and when returned, and (c) for a jack subjected to abnormal load or shock, immediately before and immediately thereafter. Repair or replacement parts shall be examined for possible defects. Jacks, which are out-of-order, shall be tagged accordingly, and shall not be used until repairs are made. All jacks shall be properly lubricated at regular intervals. Hydraulic jacks exposed to freezing temperatures shall be supplied with an adequate antifreeze liquid.

23. ASBESTOS HAZARD ABATEMENT PLAN (if applicable).

23.1 *Definition.* Non-friable asbestos containing materials do not always require special handling, however, during demolition and removal of this material, dust and airborne asbestos fibers will sometimes be released requiring asbestos hazard abatement operations.

23.2 The contractor shall prepare and submit as part of the APP a detailed job-specific plan of the work procedures to be used in the removal of material containing asbestos in accordance with 29 CFR 1926.1101. The plan shall include, but not limited to:

- a. safety precautions such as lockout tagout, fall protection, and confined space entry procedures and equipment and work procedures to be used in the encapsulation, and removal of materials containing asbestos.
- b. the precise personal protective equipment to be used including, but not limited to respiratory protection, type of whole-body protection, the location of the asbestos control areas including clean and dirty areas, buffer zones, showers, storage areas, change rooms, encapsulation method, interface of trades involved in the asbestos work, sequencing of asbestos related work, disposal plan, type of wetting agent and asbestos sealer to be used, locations of local exhaust equipment, planned air monitoring strategies, and a detailed description of the method to be employed in order to control environmental pollution.
- c. if the work being performed is in a building, the special safety precautions that must be taken if any portions of the building is occupied.
- d. certificates prior to the start of work, signed by each employee doing asbestos removal work that the employee has received training in the proper handling of materials and wastes that contain asbestos in accordance with 40 CFR 763, understands the health implications and risks involved, and understands the use and limits of respiratory equipment to be used.
- e. the name, address, and telephone number of each testing laboratory selected for the sampling, analysis, and reporting of airborne concentrations of asbestos fibers along with certification that each laboratory is American Industrial Hygiene Association (AIHA) accredited and that persons counting the samples have been judged proficient by current inclusion on the AIHA Asbestos Analysis Registry and successful participation of the laboratory in the Proficiency Analytical Testing Program.
- f. written evidence that the landfill for disposal is approved for asbestos disposal by EPA State and local regulations.
- g. statement that the contractor will comply with all applicable laws, ordinances, criteria, rules, and regulations of Federal, State, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials.

24. MATERIAL CONTAINING LEAD REMOVAL PLAN (if applicable).

24.1 *Definition.* Material containing lead is classified as a hazardous waste and special handling, storage, and disposal must be made according to federal and local hazardous waste management regulations.

24.2 The contractor shall prepare and submit as part of the APP a detailed job-specific plan of the work procedures to be used in the removal of material containing lead. The plan shall include, but not limited to:

- a. sketch showing the location, size, and details of lead control areas, critical barriers, physical boundaries, location and details of decontamination facilities, viewing ports, and mechanical ventilation system.
- b. description of equipment and materials, the appropriate engineering controls implemented, and job responsibilities for each activity such as cutting, sawing, sanding, scraping, abrasive blasting, and/or high temperature cutting of materials containing lead paint from which lead is emitted.
- c. eating, drinking, smoking and sanitary procedures, interface of trades, sequencing of lead related work, collected waste water and dust containing lead and debris, air sampling, respirators, personal protective equipment, and a detailed description of the method of containment of the operation to ensure that airborne lead concentrations of 30 micrograms per cubic meter of air are not reached or exceeded outside of the lead control area.
- d. operational and environmental sampling, training and strategy, sampling and analysis strategy and methodology, frequency of sampling, duration of sampling, and qualifications of sampling personnel in the air sampling portion of the plan.
- e. certificate for each employee, signed and dated by the accredited training provider, stating that the employee has received the required training in accordance with 40 CFR 745.
- f. the name, address, and telephone number of the testing laboratory selected to perform the air and wipe sampling, testing, and reporting of airborne concentrations of lead (use a laboratory participating in the EPA National Lead Laboratory Accreditation Program).
- g. description of the disposal of all material, whether hazardous or non-hazardous in accordance with all laws and provisions and all federal, State or local regulations.

CERTIFICATE OF COMPLIANCE

This certificate shall be signed by an official of the company that provides cranes for any application under this contract. Post a completed certificate on each crane brought onto Navy property.

CONTRACTING OFFICER'S POINT OF CONTACT <small>(Government Representative)</small>	PHONE
PRIME CONTRACTOR/PHONE	CONTRACT NUMBER
CRANE SUPPLIER/PHONE <small>(if different from prime contractor)</small>	CRANE NUMBER <small>(i.e., ID number)</small>
CRANE MANUFACTURER/TYPE/CAPACITY	
CRANE OPERATOR'S NAME(S)	
I certify that 1. The above noted crane and associated rigging gear conform to applicable OSHA regulations (host country regulations for naval activities in foreign countries) and applicable ASME B30 standards. The following OSHA regulations and ASME standards apply: _____ 2. The operators noted above have been trained and are qualified for the operation of the above noted crane. 3. The operators noted above have been trained not to bypass safety devices during lifting operations. 4. The operators, riggers, and company officials are aware of the actions required in the event of an accident as specified in the contract.	
COMPANY OFFICIAL SIGNATURE	DATE
COMPANY OFFICIAL NAME/TITLE	
POST ON CRANE (IN CAB OR VEHICLE)	

CRANE AND RIGGING GEAR ACCIDENT REPORT				Report Date:
Accident Category: <input type="checkbox"/> Crane Accident <input type="checkbox"/> Rigging Gear Accident				
From: UIC:		To: Navy Crane Center Norfolk Naval Shipyard, Bldg. 491 Portsmouth, Virginia 23709-5000 Fax 757-967-3977 NFSH_NCC_ACCIDENT@NAVY.MIL		
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:	
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:		
Reported to NAVSAFECEN? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Accident Type:				
<input type="checkbox"/> Personal Injury	<input type="checkbox"/> Overload	<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 (Include Signature, Code, Date):				
	Code	Date		
	Code	Date		
Certifying Official:	Code	Date		

CRANE AND RIGGING GEAR ACCIDENT REPORT INSTRUCTIONS

This form is designed for facsimile transmission without a cover page or by Email and, with enclosures and signatures, shall be the official document. 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. The E-mail address is <http://accident@ncc.navfac.navy.mil>.

1. Accident Category: Indicate either crane accident or rigging gear accident.
2. From: The naval activity that is responsible for reporting the accident and UIC number.
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. Location: The detailed location where the accident took place (e.g., building 213, dry dock 5).
13. Weather: The weather conditions at time of accident (e.g., wind, rain, cold).
14. Crane Capacity: The certified capacity of the crane (e.g., 120,000 pounds), if applicable.
15. Hook Capacity: The capacity of the hook involved in the accident at the maximum radius of the operation, if applicable.
16. Weight of Load on Hook: If applicable, the weight of the load on the hook.
17. Fatality or Permanent Disability?: Check yes or no.
18. Material/Property Cost Estimate: Estimate total cost of damage resulting from the accident.
19. Reported to NAVSAFECEN?: Self-explanatory.
20. Accident Type: Check all that apply.
21. Cause of Accident: Check all that apply.
22. Chargeable to: Check all that apply.
23. Crane Function: Check the function(s) in operation at time of accident. Check all that apply. Check N/A if a rigging gear accident.
24. Is this a recurring problem?: Check yes or no. Identify any other similar accidents.
25. Situation Description/Corrective Actions: Self-explanatory.
26. Preparer: Self-explanatory.
27. Concurrences: Self-explanatory.

28. Certifying Official (Crane Accidents Only): Self-explanatory.