THE CRANE CORNER

Navy Crane Center Technical Bulletin

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WORD FROM TOPSIDE

Sam Bevins

Navy shore activities had another very safe year in FY13. Millions of crane lifts and rigging operations were performed with proactive safety at more than 400 Navy shore activities, detachments, and shore-based operating units, achieving one of the safest years of Navy shore weight handling operations on record.

With our "wide aperture" definition for crane and rigging accidents, i.e., virtually any unplanned event regardless of degree of injury or whether damage occurred, our philosophy of reporting, analyzing, and learning from the small events has proven effective in keeping the number of truly serious accidents at a very low level. We are now realizing incremental progress in raising the sensitivity on the part of activity personnel to report near misses and other unplanned events in addition to those events that meet our comprehensive accident definition. Activities continued to respond well to the challenge of reporting near miss events during FY13 by exceeding the near miss report submissions of FY12 by over 50 percent. This is truly admirable and reflects, in part, the surveillance/oversight programs that many activities established in FY13. These programs are still in early development at many activities with few “tangible” deficiencies and unsafe practices being reported. In addition, oversight is needed just as much inside shops with single person, small crane operations as at the waterfront where crane teams do the heavy lifting. With practice and further development (and guidance from our evaluation teams), I am confident we will turn the corner and start to see the reporting of more near misses than accidents. This healthy strategy will significantly and continuously improve the safety of Navy shore weight handling operations over the long term.

I strongly encourage a culture wherein people instinctively focus on the value of gaining lessons learned from the reporting of ALL unusual events in a weight handling operation to prevent more serious events from occurring. Leadership should encourage this and not negatively focus solely on the number of events reported but on minimizing and eliminating the significant and serious weight handling accidents, which is our true goal.

Recognizing hazards and mitigating them through proper lift planning and communication will help ensure a safe lift. We must continue to remind our folks that no task is so important or urgent that it cannot be done SAFELY. And taking the time to be safe can increase our productive support to the Fleet.

Inside This Issue

CRANE SAFETY ADVISORIES AND EQUIPMENT DEFICIENCY MEMORANDA

We receive reports of equipment deficiencies, component failures, crane accidents, and other potentially unsafe conditions and practices. When applicable to other activities, we issue a Crane Safety Advisory (CSA) or an Equipment Deficiency Memorandum (EDM). A CSA is a directive and often requires feedback from the activities receiving the advisory. An EDM is provided for information and can include deficiencies to nonload bearing or nonload controlling parts. A complete list of CSAs and EDMs can be found on the Navy Crane Center's web site.

CSA 205A – FAILURES OF 2 PORTABLE FLOOR CRANES DURING LOAD TESTING

Remarks:

Revision: As directed by CSA 205, activities shall remove all Walter Meier Manufacturing and all Shin Fu of America 2-ton portable floor cranes from use immediately. The purpose of this revision is to include Westward Model No. 3ZC71 to the list of portable floor cranes manufactured by Shin Fu Company of America. For ready reference, this revision replaces CSA 205 in its entirety.

Background:

A. Four 2-ton portable floor cranes (engine lifts) have experienced structural failures during 125 percent capacity load testing in the past year. These four floor crane failures are in addition to the two prior failures. Two of the portable floor cranes were manufactured by Walter Meier Manufacturing. The other two were manufactured by Shin Fu Company of America.

B. Walter Meier Manufacturing stated that there are two designs using the same model number. The older design does not meet ASME PALD. The OEM redesigned the crane to meet ASME PALD, but did not change the model number. There is no way to distinguish the difference between the models other than to disassemble and measure the thickness of structural steel members.

C. Shin Fu Company of America responded to the initial floor crane failures (CSA172 and 172A), but have no additional response for the two most recent failures that occurred during load testing. Shin Fu Company of America states that the 2-ton portable floor cranes are designed in accordance with ASME PALD despite the four reported structural failures at or below 125 percent capacity.

D. NAVFAC P-307 requires portable floor cranes to be in compliance with ASME PALD. ASME PALD requires portable floor cranes to meet the minimum overload capacity of 150% of rated capacity proof load.

E. The nature and number of failures that have occurred with 2-ton portable floor cranes manufactured by Walter Meier Manufacturing and Shin Fu Company of America with no resolution from the OEM is unacceptable.

Direction:

A. Activities shall remove all Walter Meier Manufacturing and all Shin Fu of America 2-ton portable floor cranes from use immediately. The distributors of Walter Meier Manufacturing and Shin Fu Company of America 2-ton portable floor cranes include Jet (Model No's JHC-200X and JFHC-200X), Omega Lift

Equipment (Model No. 44020), Mac Tools Inc. (Model No. EC3000), Matco Tools (Model No. MEC2T), Pro-Lift (model no. T-1481), and Westward (Model No. 3ZC71).

B. Activities shall notify NAVCRANECEN POC of the manufacturer/distributor and the model/serial number for each portable floor crane removed from service.

C. These portable floor cranes shall remain out of service until the manufacturers can provide a reasonable explanation and solution to the repeated structural failures. NAVCRANECEN will provide further direction as additional information becomes available in a revision to this CSA.

THE RIGGER-IN-CHARGE
KEYSTONE OF EVERY CRANE LIFT

NAVFAC P-307 paragraph 10.2.1.1 places overall control of crane operations with the Rigger-in-Charge (RIC). Recent accidents have identified instances of the RIC not being aware of rigging configurations, getting involved with performing rigging functions (and losing supervisory oversight) with other rigging personnel available to do those tasks, being distracted by various factors, and not being in the best position to monitor the load, rigging gear, and maintain overall envelope control.

The RIC has overall control of the operation including:

Planning and briefing the crane team on all aspects of the lift, including setting/defining the crane operating envelope.

Determining the weight of the load to be lifted.

Establishing the appropriate method of communication with the operator. Communications shall be in accordance with NAVFAC P-307, paragraph 10.6.

Ensuring the load is properly rigged. This includes ensuring that the load is properly rigged even if rigged by employees of another activity.

Ensuring the crane operating envelope remains clear of all obstructions.

Providing signals to the operator or assigning another rigger or signalperson to provide the signals.

Conducting the operation in a safe manner. The RIC is responsible for coordinating the activities of the other crane team members.

Because the RIC is responsible for the overall operation, he/she must be in a position that is most advantageous to provide oversight and to execute the plan and ensure the requirements are being met. This includes overseeing the whole operation from “cradle to grave,” including rigging gear attachment/removal, verifying clearance for the load and/or crane during movement, and crane parking when not in use. RICs cannot let themselves get involved too closely in a specific task, such as rigging the load, to the detriment of overall control of the entire lift process. If situations change or the plan is not working, STOP operations, notify the

supervisor and re-brief the crane team prior to continuing with operations. Additionally, remember that all crane team members can call STOP.

SITUATIONAL AWARENESS AND RISK MITIGATION

Situational awareness and proper risk mitigation are key components of safely operating, maintaining, and testing weight handling equipment. It is imperative to understand, completely, the potential hazards that may occur during our daily routine. An action itself may be safe and have no potential for danger but what effect does this action have on something or someone else? Recently, an activity had an incident that illustrates this point clearly. It is beneficial for us to learn from the experiences of others to prevent repeating actions and to take a step back and look at our own procedures to assess the cause and effect of our daily routines that may have a potentially dangerous outcome.

An activity reported a fire igniting under an engine exhaust manifold heat-insulating blanket of a mobile crane while the engine was running to support maintenance testing. During maintenance, the activity ran the engine with all load banks on as a part of a maintenance evolution in accordance with their procedures. Running the engine at full capacity created enough heat to ignite an accelerant that was absorbed by the heat blanket. A mechanic noticed the fire and extinguished it with a nearby ABC fire extinguisher. The fire department was called to the scene to ensure the fire was out and to perform an investigation.

The fire departments investigation included the use of a Thermal Imaging Camera (TIC) to monitor the temperature of the turbo exhaust manifold. The readings showed that the exhaust manifold was 700 degrees F at the time of the reading. The fire department also took samples of the exhaust manifold heat blanket and sludge-like material from under the heat blanket for testing. The analysis of the heat blanket and sludge-like material displayed a profile consistent with the propylene glycol antifreeze used on the crane. The flash point of the propylene glycol antifreeze is between 230-270 degrees F, far below the reading taken by the TIC.

The probable reason the antifreeze was under the heat blanket is the proximity of the thermostat housing to the location of the blanket. Regularly scheduled maintenance is performed by the activity on the thermostat and to the sensors seated in the thermostat housing. The mechanics are instructed to drain the antifreeze prior to servicing the thermostat and prior to testing the sensors. However, after draining the antifreeze, there is a potential for antifreeze to escape the housing and drip onto the heat blanket. As in past practice, the activity's mechanics are instructed to wipe down the top of the heat blanket if spillage occurs. Containment was not established to control spillage of anti-freeze.

Having situational awareness in which one action, like dripping or spilling antifreeze, can cause a domino effect leading to a fire while testing a completely different component at another time is imperative. A string of events had to occur for this fire to start. Antifreeze during maintenance of a nearby component drips or spills onto an exhaust manifold heat blanket, the heat blanket absorbs and keeps the antifreeze from evaporating, maintenance testing of another component in which the engine is run with all load banks on, creating a very high temperature above the flash point of the antifreeze. Knowing the flashpoint of the antifreeze and the heat at which the exhaust manifold can reach should have been considered in the maintenance of the thermostat housing. Precautions to keep the antifreeze from contacting the heat blanket instead of merely wiping up excess antifreeze should have been considered. Although this incident was unlikely to occur due to the number of events that had to happen, it did. Having situational awareness and using proper risk mitigation to assess the

likelihood and severity of potential hazards in the workplace are concepts we all have to diligently apply in our daily routine.

TECH-BYTES

How many times have you watched a television commercial and thought, "I had that idea!" or "I wish I had thought of that?" If you are like most, it has probably happened very often. Unfortunately, while we might think of great ideas, we often do not believe they are worth the effort or we just do not have time in our busy schedules to investigate it further. Well, you may be in luck. The Navy Crane Center wants your ideas and input!

Do you have an idea or have you seen a new piece of equipment or technology that would improve our business of weight handing? If so, we want you to share it with us.

Every day, we see where the automobile industry has implemented or designed new technology into the latest car models. This new technology has developed rapidly and now we can have controls that can parallel park our car, avoid road obstructions, automatically adjusts your speed, and even one company that is touting a driverless car! With all these new systems being implemented, it seems clear that the days of driving a car by the "seat of our pants" or using a road map are becoming distant memories.

While we do not envision an operator-less crane in our "near" future, we do not want to ignore the possibility of incorporating the best safety technology the manufacturing industry has developed if it can be useful in the Navy's weight and handling program.

Whether it may be a new load indicating system for a crane or rigging, video cameras, or improved forms of safety gear for fall protection equipment, if you have seen or used anything that you thought, "We could use this for …" or "I wish I had thought of that," we want to know.

We will investigate the idea and determine if it may be beneficial for the Navy's weight handling program. You can forward your ideas to nfsh_ncc_crane_corner@navy.mil.

WEIGHT HANDLING SAFETY BRIEF

The attached Weight Handling Safety Brief (WHSB) is provided for communication to personnel associated with Navy Shore Weight Handling. Weight handling is a dynamic and dangerous operation if not performed correctly. As such, we cannot lose situational awareness while planning or performing weight handling operations. The purpose of this brief is to discuss several important actions or steps for identifying and mitigating potential hazards associated with weight handling operations. This information is applicable to all personnel who work in and around a weight handling operating envelope.

The Navy Shore WHSB is intended to be a concise and informative, data driven, one page snapshot of a trend, concern, or requirement, related to recent / real time issues that have the potential to affect our performance and efficiency. The WHSB is not command specific and can be used by your activity to increase awareness of potential issues that could result in problems for your weight handling program. The WHSB can be provided directly to personnel, posted in appropriate areas at your command as a safety reminder to those performing weight handling tasks, or it can be used as supplemental information for supervisory use during routine safety

meetings. Through data analysis of issues identified by accident and near miss reports, and taking appropriate actions on the information we gain from that analysis, in conjunction with effective communication to the proper personnel, we have the tools to reduce serious events from occurring. As we improve the Navy Weight Handling safety posture, we improve our performance, thereby improving our efficiency, resulting in improved Fleet Readiness!

When Navy Shore Weight Handling Safety Briefs are issued, they are also posted on the NCC's web site at: http://www.navfac.navy.mil/ncc

Navy Shore Weight Handling Safety Brief!

Title: OPERATIONAL SAFETY AND ACCIDENT MITIGATION

Target Audience: All Weight Handling Personnel, Supervisors, and Managers

ASSESS OPERATION

MITIGATE RISK

BRIEF PLAN

PROCEED AND REMAIN ALERT

- **Crane operations** pose significant accident potential, and **require** a high degree of **risk mitigation.**
- **Conditions** inside the operating envelope can **change quickly** and without warning.
- Constant **situational awareness is essential.**
- Complacency is the enemy; **vigilance is the best defense.**
- On-site crane personnel (crane team members, supervisors, etc.) are the first and last line of defense in mitigating and preventing accidents.
- Consider the following to help **mitigate accident potential** during operations:
  - Avoid pinch-points! Position the crane on the job site in a manner that provides safe clearance between any object and any part of the crane - in any position that the crane may operate. This should be discussed in the pre-job brief.
  - Talk to each other! Communications between crane team members is essential. If communication between the operator and the rigger/signaler is hindered or lost during operations, the operation shall be stopped until communications are re-established. Brief and re-brief as often as needed to mitigate risk.
  - Maintain situational awareness! This is the responsibility of the entire crane team!
    - Note: The crane operator often has a height advantage over the ground crew and may see things the other team members may not notice. Be vigilant!
  - Control your work area! If your operational envelope moves, a significant degree of situational awareness would be expected from all team members as the crane and load travel. Movements and any potential hazards along the path should be identified and discussed in the pre-job brief, including the best manner in which to deal with them.
  - Brief personnel! All crane team members should understand the operational plan, remain alert to potential risks, be in their designated positions at the correct time, and be prepared to immediately give the stop signal should a concern arise.

25 October 2013

SAFETY

Navy Crane Center 13-S-04

WEIGHT HANDLING TRAINING BRIEF

The attached Weight Handling Training Brief (WHTB) is provided for communication to personnel associated with Navy Shore Weight Handling. Recent changes to Navy Knowledge Online/Navy E-Learning (NKO/NeL) have improved accessibility to the 16 web-based NAVFAC P-307 Weight Handling training courses. Navy eLearning (NeL) is the internet site where the NAVFAC P-307 web-based courses are located. Until recently, NEL was only accessible via NKO and non-DON personnel required sponsorship to gain access. The NAVFAC P-307 courses can now be accessed directly from NEL without having to go through NKO. Due to increased security requirements, NeL (and NKO) can only be accessed by personnel having a valid Common Access Card (CAC). Accessing these courses has traditionally required personnel to have both a Navy Knowledge Online (NKO) account and a Navy eLearning account. The NKO account is no longer required. Because CAC is required and direct access permitted, sponsorship is no longer necessary (nor offered) to access and take NAVFAC P-307 courses via NeL.

Similar to the Navy Shore Weight Handling Safety Brief, the WHTB is intended to be a concise and informative discussion of a trend, concern, or requirement, related to recent/real time issues that have the potential to affect our performance and efficiency. The WHTB is not command specific and can be used by your activity to increase awareness of potential issues or weaknesses that could result in problems for your weight handling program. The WHTB can be provided directly to personnel, posted in appropriate areas at your command as a reminder to those performing weight handling tasks, or it can be used as supplemental information for supervisory use during routine discussions with their employees.

When Navy Shore Weight Handling Safety or Training Briefs are issued, they are also posted on the NCC's web site at: http://www.navfac.navy.mil/ncc

SUMMARY OF WEIGHT HANDLING EQUIPMENT ACCIDENTS FOURTH QUARTER FY13

The purpose of this message is to disseminate and share lessons learned from select shore activity weight handling equipment (WHE) accidents, near misses, and other unplanned occurrences so that similar accidents can be avoided and overall safety can be improved.

Accidents: For the fourth quarter of FY13, 72 Navy WHE accidents (51 crane and 21 rigging) were reported. Of the 72, 15 were considered significant (overload, dropped load, injury, or two block). Navy contractors reported 10 crane and rigging accidents, of which 4 were significant, including 3 dropped loads.

INJURIES

Accidents: Four injuries were reported. Two of the injuries occurred as a result of the load shifting or rotating with hands placed in pinch points. This is a common theme observed in many weight handling injuries and is always preventable. A rigger's hand was injured (pinched finger) when it was placed between a wire rope pendant and a shackle attached to a strongback. In another accident, during the removal of pipe and valves from an overhead, the pipe shifted, cutting a nylon strap and injuring a rigger's finger (broken finger and stitches). In another event, as a pump was being rigged out of a shipboard auxiliary space, a sling failed causing the pump to swing back and strike the worker in the chest, resulting in cuts and bruises.

Lessons Learned: Injuries sustained during these weight-handling evolutions were due to a loss of control of the load and/or personnel placing their extremities in pinch points. Each individual must accept responsibility for helping to ensure their own safety, including stopping when proper equipment or conditions are less than adequate. In addition, personnel should keep extremities clear of the load and remain alert for potential or sudden shifts of the load. Always maintain a safe distance between yourself and the load and utilize lashing and tag lines to assist in controlling the load whenever possible.

DROPPED LOADS

Accidents: Four dropped load events were reported during the quarter. During in-hull rigging work to relocate a shaft housing, a chain fall failed causing the housing to drop to the deck. While removing a landing boat from its stored position using a floating crane, one end of the boat dropped back into its cradle when the lift point broke. While providing crane support during the load test of a horizontal winch, the line handlers lost control of the hand-tended line resulting in the load dropping four feet. In another instance, riggers were moving a heavy object inside of a building with the aid of chain falls. During the move, a door on the object being moved popped open and some of the loose components inside fell to the ground.

Lessons Learned: Pre-lift preparation and job planning are essential for safe weight handling. Crane teams and riggers must be briefed on all facets of the job including weight of the load in order to ensure gear is adequately selected. One dropped load crane accident occurred as a result of using an improper attachment point. The rigger-in-charge is responsible for ensuring that the load is properly rigged. The best method to do this is by visual verification and, if necessary due to location restrictions, a report from a qualified rigger.

OVERLOADS

Accidents: Six overloads were reported. During load test of a mobile crane, the maximum allowable test radius for the test load was exceeded. During a crane lift to remove a mooring chain from the riverbed, wire rope clamps attached to form a lashing point for the mooring chain were overloaded and slipped, allowing the chain to drop. During maintenance work to replace wire rope on four service winches, a synthetic round sling being used in a choker hitch was overloaded by 300 lbs. A crane was overloaded while weighing a component when the weight of the scale was not accounted for. During work to rotate a hatch fairing, rigging gear was overloaded when the correct reduction (D/d ratio) for the sling over the shackle pin was not used. A synthetic sling was damaged due to an overload, when a forklift conducting lifts was improperly rigged.

Lessons Learned: Overloads are significant accidents that have the potential to cause significant equipment damage or injury to personnel. The overloads reported during the fourth quarter primarily occurred as a result of improper selection of gear. Overloads are prevented by adhering to precautions listed in NAVFAC P-307 Section 10. Personnel should know the weight of the load being lifted, select appropriate gear, and properly install the gear.

TWO-BLOCK ACCIDENT

Accident: A bridge crane was two-blocked when an untrained operator hoisted a crane into and beyond the upper limit switch. The subsequent investigation determined that the crane was operating erratically and inconsistent with the motions on the pendant controls. The limit switch failure and erratic motions of the crane were determined to have been caused by a phasing reversal of the power supply during electrical facility maintenance work that was performed earlier in the day.

Lessons Learned: Untrained personnel should never operate weight-handling equipment. The accident example above identifies a facility maintenance error that resulted in the weight handling equipment improperly functioning. Sufficient space should be left between the hoist block and the upper limit switch when stowing the crane so that the next operator can detect improper block movement before a two-block event occurs. If the crane functions (i.e., hoist, trolley, or bridge functions) do not operate properly, or as labeled, the inspection and crane operation should be stopped and supervision should be notified.

Collisions accounted for 45 percent of the Navy crane accidents (13 crane collisions and 10 load collisions). Supervisors should ensure that they communicate the need for all crane team personnel to maintain a heightened awareness during crane operations, particularly during lifts that are considered routine. Generally, more emphasis is placed on more complex lift scenarios and the repetitive or less complex lifts tend to lull personnel into relaxing their guard or becoming complacent. Supervisors should stress the importance of pausing prior to conducting the lift in order to ensure common issues like potential collision hazards, travel path obstructions, and changing conditions are not going to affect the lift. In most instances, activities identified improper operation, poor communication, and procedural errors as root causes for accidents reported. Safe crane operations occur when personnel in the operating envelope plan their work, execute per requirements, and stop if abnormal conditions occur. Supervisors and managers can assist by conducting routine and frequent tours in order to identify areas that require improvement and provide feedback to weight handling personnel. Personnel should also be encouraged to identify deficiencies on the job and ensure the activity documents and tracks their issues.

NEAR MISSES

The goal to reduce accident severity continues to be a primary focus. More and more activities are utilizing the identification of near miss and other unplanned occurrence reporting to improve the safety of the Navy's weight handling program. Another strong increase in Navy crane and rigging near miss reports was seen in FY13 as compared to FY12. Reporting near misses provides activities the opportunity to share lessons learned with other activities and identify trends that provide an indicator of program maturity. This encouraging trend demonstrates a desire to be proactive in the prevention and recognition of unsafe practices or conditions that could potentially result in accidents. Focusing on identifying, documenting, and correcting deficiencies at the lowest possible level significantly improves overall weight handling program safety and reduces the number of potentially significant accidents. In fact, there was only one reported weight handling accident during FY13 that met the OPNAV Class "C" reporting threshold. Near miss reports in the fourth quarter identified fewer instances of wire rope miss-spools and rigging gear deficiencies, and an increase in dynamic issues identified during operations. Personnel should continue to look for, correct, document, and share these tangible lessons learned that have the potential to lead to a crane accident.

Weight handling program managers and safety officials should review the above lessons learned with personnel performing weight-handling functions and consider the potential risk of accidents occurring at your activity. As a reminder, there are seven crane accident prevention videos available to assist activities in raising the level of safety awareness among their personnel involved in weight handling operations. These videos provide a very useful mechanism for emphasizing the impact that the human element can have on safe weight handling operations. In addition to these lessons learned safety videos, other videos are available (Safe Rigging and Operation of Category 3 Cranes, Mobile Crane Safety, Weight Handling Program for Commanding Officers, and "Take Two") to assist commands in crane safety awareness. All can be viewed on the Navy Crane Center website, http://www.navfac.navy.mil/ncc. Please remind your personnel that no task is so important or urgent that it cannot be performed safely. Taking the time to be safe can increase our productive support to the fleet. I encourage our Navy shore activity weight handling program personnel to continue to evolve a culture where our personnel instinctively focus on the value of gaining lessons learned from the reporting of ALL unusual events in a weight handling operation.

CRANE ACCIDENT PREVENTION, SAFETY CHALLENGE FOR FY14

Good News! Only one Class C Navy Shore Weight Handling Equipment (WHE) accident was reported during FY13; making this one of the safest years on record. A Class C accident is one that results in a total cost of property damage to Government and other property between $50,000 and $500,000, or a nonfatal injury or illness that results in one or more days away from work beyond the date of injury. Considering that millions of lifts are performed each year by more than 400 shore activities, detachments, and shore-based operating units with the Navy's extensive inventory of cranes and related gear, this is a major accomplishment! This extraordinary safety record is a testament to the dedication and hard work of everyone involved in the Navy shore weight-handling program around the world directly supporting fleet readiness. During FY12, six events met the Class C reporting threshold. Even with the significant reduction of Class C accidents, one of these events is one too many. There remains much more room for improvement. There were 12 minor injuries reported throughout the fiscal year. Nine of the 12 injuries were noted in rigging gear accident reports. Most of the injuries occurred as a result of being struck by the load or by being caught in a pinch point. On a positive note, crane overloads decreased by 30 percent and two-block related accidents dropped by 55 percent.

As evidenced by these improvements, our focus on reporting and learning from the small events continues to pay off in minimizing the more serious accidents. The number of near miss and other unplanned occurrence reports submitted to the Navy Crane Center increased by 56 percent over the FY12 totals. In fact, near miss reports accounted for 41 percent of the total Navy equipment/personnel involved WHE report submissions in FY13. Fourteen Navy activities submitted near miss reports for the first time. Our challenge will be to carry this positive effort into the new fiscal year. This healthy strategy will continue to improve the safety of weight handling operations over the long term. Our goal is to evolve a culture wherein people instinctively focus on the value of gaining lessons learned from the reporting of all unusual events in a weight handling operation to prevent more serious events from occurring. I challenge each activity to embrace this approach.

Weight handling is a dynamic and dangerous operation if not performed correctly. We cannot lose situational awareness while planning or performing weight-handling operations. Human error is the cause of most accidents. It is imperative that weight-handling managers be proactive in reinforcing safety expectations with all hands involved in weight handling operations. Through appropriate safety stand-downs and increased documented observations of operations. Every potential accident prevented not only improves the safety of personnel but also significantly improves operational efficiency by avoiding the inherent schedule disruption and cost associated with accident recovery actions.

As we approach the winter months, I encourage weight handling managers and supervisors to place a special focus on safe crane and rigging operations. In many regions, environmental working conditions will continue to worsen and bring ice, sleet and snow conditions. Frigid temperatures and icy conditions pose significant challenges to your crane teams as they support weight-handling demands. Operations in cold weather reduce personnel dexterity and induce additional physical challenges, which can lead to accidents. Cranes, barge decks, ground level rails, and rail switches can become hazardous for slips, strains, and falls. Exterior working surfaces, platforms, walkways, and ladders are especially prone to icing conditions and appropriate precautions should be put into place to minimize this risk. Cranes and rigging gear are also affected by the cold weather. Crane sheaves and hoist blocks can become iced up or frozen which can result in improper spooling of wire rope and cause damage to cranes and components. Ice build-up on mobile crane booms can also create hazardous conditions.

Each weight handling accident diminishes support to the fleet. A safe and reliable Navy weight-handling program is an essential enabler for fleet readiness. I encourage commanding officers to intensify your efforts to raise the level of safety awareness in your activity's weight handling operations and continue to evolve a culture wherein people instinctively focus on the value of gaining lessons learned from reporting ALL unusual events in a weight handling operation.

ACCESSING NAVFAC P-307 WEB-BASED TRAINING COURSES

All military, civilian and contractor personnel involved in the operation, maintenance, inspection, and testing of Navy weight handling equipment (WHE) are required to complete NAVFAC P-307 required training. To facilitate, Navy Crane Center (NCC) offers 16 training courses, free of cost, via the Navy eLearning (NeL) website. They include:

- General Crane Safety
- General Crane Safety Refresher
- Category 2 and cab-operated Category 3 Crane Safety

- Category 2 Crane Safety Refresher
- Category 3 non-cab operated Crane Safety
- Category 4 Crane Safety
- Crane Rigger
- Rigging Gear Inspection
- Load Test Director
- Certifying Official
- Contractor Crane Awareness
- Crane Mechanic
- Mobile Crane Mechanic
- Mechanical Crane Inspector
- Crane Electrician
- Electrical Crane Inspector

Accessing these courses has traditionally required personnel to have both a Navy Knowledge Online (NKO) account and a Navy eLearning account. Personnel were also required to go through the NKO website to get to NeL. An NKO account is no longer necessary. The benefits of this change include:

- Direct access to NeL
- NKO account not required
- Easier access
- Sponsorship not required

A common access card, or CAC, is still required to access NeL (and NKO). To learn more about CAC, visit:

http://www.cac.mil/

Because a CAC is required and direct is access permitted, sponsorship is no longer necessary (nor offered) to access and take NAVFAC P-307 courses via NeL.

The current process for accessing NeL is different for each group.

Navy, Marine Corp, and Coast Guard active duty, reserves, civil service, and contractors, with properly authorized CACs [i.e., validated through DEERS], and who have an existing NKO account, can log into NeL through NKO (the traditional route) or they can go directly to NeL via the link provided at the end of this article. If you do not have an NKO account, register for one via the NKO login screen (link following this paragraph). NeL access is automatically granted upon approval of your NKO user account. While an NKO account is not necessary, military personnel may wish to register via NKO to obtain the benefits of an NKO account. Civil service and contractor personnel who may not need the benefits of an NKO account may request a NeL account as described below in the "Other Services" paragraph.

https://wwwa.nko.navy.mil/portal/home/

Other services, such as **Army and Air Force,** will need to request a NeL account. After requesting and being approved for a NeL account, active duty, civil service, and contractor personnel, with properly authorized CACs (i.e., validated through DEERS), may access NeL directly via the link at the end of this article. To request a NeL account, call the helpdesk at 1-877-253-7122 opt 1 or do the following:

- go to: **https://ile-deers.nko.navy.mil/ELIAAS/Banner.jsf**
- click "Requests" (either one). Nothing obvious will happen but this is an important step.
- click the "OK" button below the banner.
- click on "NeL Learner Account Request Form."
- Select/click "Agree," "OK," "Agree" buttons as you scroll down the screens.
- Fill out the request form completely and enter "YOUR" contact data in both the "Requestor Information" and "Government Sponsor Information" sections of the form.
- Click "Submit."

For more detailed information, including a pictorial guide, go to the NCC Training web page and click on the Web-Based Training link at the bottom of the screen.

NCC Training Web Page:

http://www.navfac.navy.mil/navfac_worldwide/specialty_centers/ncc/about_us/resources/training.html

NeL ACCOUNT REQUESTS AND COURSE CATALOGS MAY BE ACCESSED DIRECTLY WITH THIS LINK:
https://ile-deers.nko.navy.mil/ELIAAS/Banner.jsf

To keep abreast of changes, please check the NKO, NeL, and/or NCC Training web pages for the latest information.

SHARE YOUR SUCCESS

We are always in need of articles from the field. Please share your sea stories with our editor nfsh_ncc_crane_corner@navy.mil.

WEIGHT HANDLING PROGRAM SAFETY VIDEOS

Accident Prevention, seven crane accident prevention lessons learned videos are available to assist activities in raising the level of safety awareness among their personnel involved in weight handling operations. The target audiences for these videos are crane operations and rigging personnel and their supervisors. These videos provide a very useful mechanism for emphasizing the impact that the human element can have on safe weight handling operations.

Weight Handling Program for Commanding Officers provides an executive summary of the salient program requirements and critical command responsibilities associated with shore activity weight handling programs. The video covers NAVFAC P-307 requirements and activity responsibilities.

Mobile Crane Safety covers seven topics: laying a foundation for safety, teamwork, crane setup, understanding crane capacities, rigging considerations, safe operating procedures, and traveling and securing mobile cranes.

"Take Two" Briefing Video provides an overview on how to conduct effective pre-job briefings that ensure interactive involvement of the crane team in addressing responsibilities, procedures, precautions and operational risk management associated with a planned crane operation.

"Safe Rigging and Operation of Category 3 Cranes" provides an overview of safe operating principles and rigging practices associated with category 3 crane operations. New and experienced operators may view this video to augment their training, improve their techniques, and to refresh themselves on the practices and

principles for safely lifting equipment and materials with category 3 cranes. Topics include: Accident statistics, definitions and reporting procedures, pre-use inspections, load weight, center of gravity, selection and inspection of rigging gear, sling angle stress, chafing, D/d ratio, capacities and configurations, elements of safe operations, hand signals, and operational risk management (ORM). This video is also available in a stand alone, topic driven, DVD format upon request.

Note: ***"Load Testing Mobile Cranes at Naval Shore Activities"*** is currently being updated to address the revised load test procedures in the December 2009 edition of NAVFAC P-307.

All of the videos can be viewed on the Navy Crane Center website: http://www.navfac.navy.mil/ncc.

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We want your feedback on the Crane Corner.
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What can we do to better meet your expectations?

Please email your comments and suggestions to
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