THE CRANE CORNER

Navy Crane Center Technical Bulletin

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A WORD FROM TOPSIDE

Tim Blanton

This month, we bid "Fair Winds and Following Seas" to our long-time Navy Crane Center Director, Mr. Sam Bevins. Sam's philosophy on weight handling safety was that no job is too important that it cannot be done safely. Taking the time to be safe actually improves weight handling efficiency, thus enhancing Fleet readiness, which is the bottom line mission for all of us. Sam's record of greatly reducing serious crane accidents within the Navy speaks for itself.

I want to assure you that all of us at the Navy Crane Center pledge to continue to pursue improvements in weight handling safety and effectiveness. No one should be satisfied with the status quo. I believe that if you are not consistently striving for improvements to move a program forward, the program rapidly begins to degrade. There remains plenty of room for improvement in our Navy's weight handling program.

One concept for accident prevention that we have adapted, and that I feel is a very effective communication tool, is our Weight Handling Safety Triangle, which we recently issued as a Weight Handling Training Brief (WHTB). Certain negative events, regardless of severity, share common causal paths. I am convinced that acting upon the causes of the lower order events and conditions, even though they resulted in little or no consequence, helps to prevent the more significant or severe events from occurring. Weight handling program managers must recognize the value of self-identifying, correcting, and learning from these lower order events so that the more serious occurrences can be prevented. The identification of lower order problems offers us many more opportunities to improve our weight handling program than only reacting to the serious accidents at the top of the triangle. I encourage you to review our Safety Triangle inside this issue. Additionally, I encourage you to review the Safety Triangle brief with your activity's data in mind. Look for what is there, where the information resides in the triangle, and potentially more importantly ask what should be there but is missing. We plan to issue a series of WHTBs on this subject for your continued awareness. As we have noted numerous times, one way to identify those lower order events and unsafe conditions is through a documented observation (surveillance) program. More and more activities have established a program of regular surveillance of weight handling operations and documenting less than optimal performance and unsafe conditions. This includes operations at the waterfront, inside production shops, and within the ship's hull. Activities that perform crane maintenance are starting to do this during maintenance work. Documented surveillances by

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experienced operation and rigging personnel help to identify potential unsafe practices. It is vitally important that lessons learned from surveillances are shared with all hands to be fully effective. As a heads-up, the next revision of NAVFAC P-307 will require an observation/surveillance program for Navy shore weight handling programs.

The Navy Crane Center, now under new leadership, will continue to pursue weight handling safety improvements at Navy shore activities. ■

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 non-load bearing or non-load controlling parts. A complete list of CSAs and EDMs can be found on the Navy Crane Center's web site.

CSA 210 – SHAW-BOX 800 SERIES HOIST SPRING SET BRAKE ADJUSTER SETTINGS VARYING WHILE IN SERVICE

Background:

A. The purpose of this CSA is to inform activities with Shaw-Box 800 series hoists of the potential for the setscrew used to adjust the brake air gap setting to become loose, allowing the air gap to drift out of the established range.

B. An activity reported the running clearance of the brake disc friction surface had been reduced to zero causing the brake discs to drag, thereby causing overheating and subsequent damage.

C. During disassembly, the activity discovered the setscrew for adjusting the air gap had become loose and there was no air gap, which caused the brakes to drag. The setscrew is retained by a prevailing torque type castle nut permanently affixed to the brake spring lever. The setscrew was found loose to the point of being easily rotated by hand, indicating the castle nut was no longer providing prevailing torque to retain the setscrew in the desired position.

Direction:

A. All activities with Shaw-Box 800 series hoists shall verify the proper brake air gap on the hoist brake as part of the next annual preventive maintenance period. Specific attention shall be directed to ensure the set-screw is being adequately retained by the castle nut (i.e. the set-screw is not easily rotated within the nut, some nominal torque is required).

B. Castle nuts found not to be exerting adequate prevailing torque to restrain rotation of the setscrew shall be replaced by changing out the brake spring lever. Alternatively, a thread

locking compound to prevent loosening of the setscrew due to vibration may be applied to the castle nut, provided adequate prevailing torque on the setscrew is achieved to prevent rotation.

P-307 QUESTIONS AND ANSWERS

Question:

NAVFAC P-307 states "Category 2 and 3 cranes shall be inspected, operationally tested (without load), and certified annually; however, a load test shall be performed at every fourth annual certification at a minimum." As shown below in Attachment 1, there is a difference of opinion in whether or not the initial load test year is also counted as the first annual certification when a crane is in the quadrennial load test program. We request that Navy Crane Center review the two options and indicate which option meets the intent of the quadrennial load test program.

Attachment 1

Option 1			
Year 1	Year 2	Year 3	Year 4
2010	2011	2012	2013
Annual Cert	Annual Cert	Annual Cert	Annual Cert
Quad Load Test	Operational Test	Operational Test	Quad Load Test

Option 2				
	Year 1	Year 2	Year 3	Year 4
2010	2011	2012	2013	2014
Annual Cert	Annual Cert	Annual Cert	Annual Cert	Annual Cert
Quad Load Test	Operational Test	Operational Test	Operational Test	Quad Load Test

Navy Crane Center Response:

Option 2 demonstrates the correct method. Option 2 will correctly provide three no load certifications for every load test certification; the minimum required and intended by NAVFAC P-307, paragraph 3.4.1.

Question:

Please clarify NAVFAC P-307, paragraph 6.1.2. Do the requirements for certification or licensure of contractor personnel operating Navy owned cranes engaged in construction apply to bridge cranes permanently installed in facilities?

Navy Crane Center Response:

The intent of NAVFAC P-307, paragraph 6.1.2, is to require contractors to meet 29 CFR 1926 subpart CC requirements for Navy cranes used in construction activities. As noted by 29 CFR 1926.1438, permanently installed overhead, gantry, and wall cranes used in construction are covered by 29 CFR 1910.179 and not 29 CFR 1926.1400 and therefore do not require additional

certification or licensing beyond P-307, paragraph 6.1.1. This will be clarified in the upcoming revision to P-307.

WEIGHT HANDLING SAFETY BRIEFS

The following two Weight Handling Safety Briefs (WHSBs) are provided for communication to appropriate personnel within the Navy Shore Weight Handling program. The first WHSB is intended for personnel involved in Category 3 crane operations. It discusses several dropped load events that were caused by improper rigging techniques (human error) during Category 3 crane operations, and emphasizes some important pre-lift actions that can prevent these types of accidents from occurring. The second WHSB is intended for personnel who operate portable lifting devices, such as a portable gantry, and discusses how to properly and safely move (travel) such devices.

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!

Navy Shore WHSBs are posted on the Accident Prevention Info tab on Navy Crane Center's web site at: http://www.navfac.navy.mil/ncc.

Navy Shore Weight Handling Safety Brief!

Title: CATEGORY 3 DROPPED LOAD ACCIDENTS

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

An increasing number of significant accidents reported in recent months involved dropped loads during category 3 crane operations. The majority of these dropped load accidents were a result of improper rigging techniques (human error). This brief discusses several dropped load events and emphasizes some important pre-lift actions that can prevent an accident.

PREVENTING DROPPED LOADS

- **A capstan ring dropped onto the deck when a swivel hoist ring (SHR) pulled out. Verify swivel hoist ring bolt size and thread type before torqueing with calibrated wrench to Original Equipment Manufacturer (OEM) stated values. See NAVFAC P-307, paragraph 14.8.8**
- **An object being lifted with a crane shifted in its lashing, striking the floor. Know the center of gravity (CG) of your load. If the CG is unknown, refer to the tech manual, label plate, shipping manifest, or obtain engineering assistance. Ensure lashing is attached tightly enough to prevent the object from shifting. See NAVFAC P-307, paragraph 14.12b.**
- **While lifting a loaded pallet, the material on the pallet shifted and fell to the deck. Inspect the pallet condition prior to use. Use only approved lifting methods (e.g., pallet caddies). Material / equipment shall be secured to the pallet and the operator / rigger shall verify that the load is ready to lift.**
- **During a lift of a steel plate, a plate clamp slipped causing the plate to fall. Know the type of material to be lifted, follow OEM requirements for inspection and use of plate clamps. See NAVFAC P-307, paragraph 14.9.1.**
- **A component was being lowered into a storage container when the container ruptured causing the container to fall and strike a stand. Verify the integrity of all containers and boxes (e.g., wood, steel). When in doubt, consult your supervisor or engineering.**
- **A rotor stator pole slipped out of its lashing and fell. Lifting varnished (slippery) rotor poles with synthetic slings or flat nylon lashing requires a seasoned rigger who can identify the CG. Properly apply rubber chafing material to prevent the load from shifting or slipping when necessary. In some cases lift rigs are available for lifting pole assemblies with a crane. See NAVFAC P-307, paragraphs 14.7.4 and 14.12.**

10 June 2014

SAFETY

Navy Crane Center 14-S-02

Navy Shore Weight Handling Safety Brief!

Title: OEM TRAVEL REQUIREMENTS FOR PORTABLE LIFTING DEVICES

Target Audience: All activities with applicable equipment

KNOW THE OEM TRAVEL REQUIREMENTS FOR PORTABLE LIFTING DEVICES

- An activity reported the complete collapse of a portable gantry while the crane was being pushed by a forklift across a flight line tarmac. One of the wheels caught on an aircraft tie down placing excessive side loading on the structure causing the gantry to collapse.
- After an inspection, it was evident that several leg brackets were distorted as the attachment points on the aluminum leg brackets elongated.
- The Original Equipment Manufacturer's (OEM) manual noted the following item addressing the design use environment: "When moving gantry under load, push on the gantry, not on the load**. Be certain that the rolling surface is hard, level, clean and smooth**." The flight line tarmac is but one example of a surface that does not meet the requirements outlined in the above statement. **Pushing the gantry with a forklift is also not allowed by the OEM**.
- **OEM requirements for proper travel of portable lifting devices both with and without loads should be fully understood prior to operation.**

10 June 2014

SAFETY

Navy Crane Center 14-S-03

WEIGHT HANDLING TRAINING BRIEF

The attached Weight Handling Training Brief (WHTB) is provided for communication to Navy shore weight handling program managers. This brief discusses the "Safety Triangle," a graphic concept showing that the probability of an activity experiencing a significant mishap is proportional to the quantity of smaller mishaps or deficiencies that the activity experiences in its day to day work.

Certain negative events (regardless of severity) share common causal paths. Acting upon (or removing) the causes of the events that result in little or no consequence (lower order events) will help to prevent the more significant or severe events from occurring. Weight handling program managers must recognize the value of finding, documenting, correcting, and learning from these lower order events so that the more serious occurrences can be prevented. The identification of lower order problems offers us opportunities to improve our weight-handling program.

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.

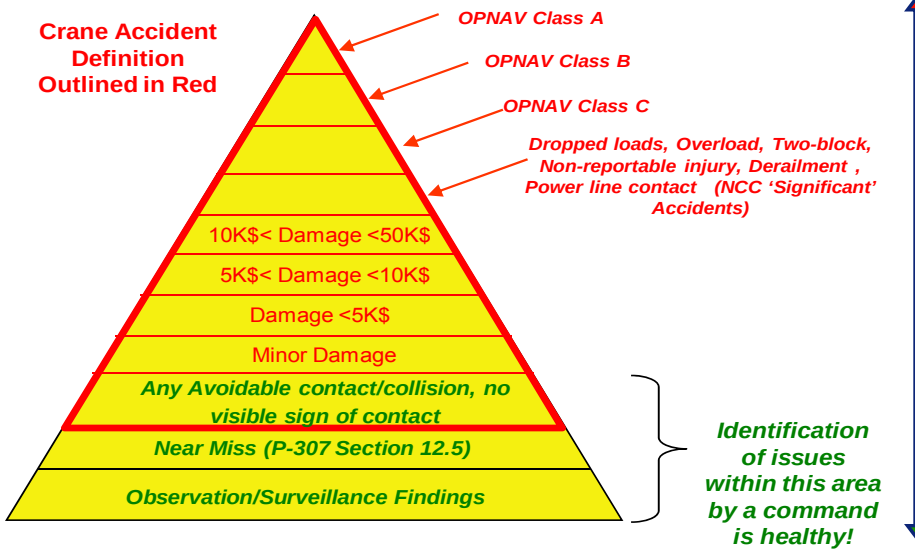
Navy Shore WHTBs are posted on the Accident Prevention Info tab on Navy Crane Center's web site at: http://www.navfac.navy.mil/ncc.

Navy Shore Weight Handling Training Brief!

Title: Safety Triangle and Healthy Weight Handling Programs

Target Audience: Navy Shore Weight Handling Program Managers

ACCIDENT PREVENTION STRATEGY



The Safety Triangle is used to demonstrate the progression of a healthy weight handling program. The **goal** of any organization is to **not have** the **pinnacle event** (OPNAV Class A), while striving to identify events in the lowest possible level of the triangle. Since we work in an environment where humans do the work or control the equipment, there is always a **human error factor** to every job.

This means that there **are always deficiencies**!! Deficiencies exist whether you identify them or not.

The **base** of the **triangle** is built on **FINDING** these **deficiencies**.

The section of the triangle outlined in red is built on those deficiencies that you do not find, …. **they find you**.

It is important to identify deficiencies, evaluate those deficiencies, and take appropriate action to correct them.

The better your observation/surveillance program and deckplate supervision, the more likely you are to recognize common trends, apply appropriate corrective actions, and as a result not progress up the triangle.

SUMMARY: There is always some aspect of a weight handling operation that can be done better. Are you looking for it, identifying it, putting actions in place to fix it, or do you reside inside the Accident triangle where you react when your deficiencies find you?

10 June 2014

Training

Navy Crane Center 14-T-02

SUMMARY OF WEIGHT HANDLING EQUIPMENT ACCIDENTS SECOND QUARTER FY14

The purpose of this article 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.

For the second quarter of FY14, 59 Navy WHE accidents (48 crane and 11 rigging) were reported. Of these, 16 (27 percent) were considered significant (overload, dropped load, injury, two-block, power line contact, or derailment). The number of significant accidents to date is approximately 15 percent less than the comparable period last fiscal year. Contractors reported a total of eight crane and rigging accidents for the second quarter, of which three were identified as significant (including one injury).

INJURIES

Accidents: Three injuries were reported in the second quarter of FY14, equaling the number reported in the previous quarter. None of the injuries this quarter resulted in lost work days. While setting up a mobile crane on a pier, a contract employee who was not part of the crane team backed into an outrigger beam/pad during outrigger deployment. While performing a lift of a circuit breaker, an employee sustained an abrasion on the face when the lifting device broke during the lift. A rigger was struck in the face and injured when a chain released and flew back after being snagged on the corner of a container that was being lifted.

Lessons Learned: Unauthorized personnel should never be allowed in, on, or around the crane when in operation. To ensure that crane operating envelope remains clear, the area must be inspected prior to operation, and controlled until crane operation is secured. Personnel must be protected from pinch point hazards associated with crane operations. Barricades, control lines, warning lines, railings or similar boundaries are effective ways to protect personnel from pinch point hazards and to protect the critical operating area around the equipment. In two of the accidents discussed above, the cause can be attributed to improper rigging. Ensuring that the load is safely rigged is a primary responsibility of the rigger and consists of proper gear selection and inspection to ensure the gear is in good condition and sufficient for the lift. Additionally, personnel must ensure that the gear is properly attached to approved lifting points. Regardless of how confident personnel are with a lift, always exercise extreme caution and stand clear of the load in the event of gear failure. Additionally, if a piece of gear becomes snagged, relieve the tension, clear the snag, and then proceed with the lift in a slow and controlled manner.

OVERLOADS

Accidents: Seven crane and rigging gear overloads were reported during the second quarter; two were crane overloads and five were rigging gear overloads. The crane overloads occurred during load testing when the wrong test weights were utilized. During propeller removal from a landing craft air cushion vehicle (LCAC), a specially designed propeller tilt/lift fixture was overloaded and damaged. A set of slings was overloaded and damaged as a result of not following an

engineered procedure. In another instance, a crane controller malfunctioned, which resulted in a rigged load becoming snagged on a fixed structure, causing overload and damage to the rigging gear. Also, a material platform was overloaded beyond its rated capacity during a lift evolution.

Lessons Learned: These overloads primarily occurred as a result of poor planning, procedural failure, and, in one case, equipment failure. When conducting lifts in accordance with procedures, it is vital that the procedure is understood and followed explicitly to ensure the lift is conducted safely. Personnel should be encouraged to stop and question procedures that are confusing or conflict with training. Specially designed equipment must be utilized only for the purpose it was designed, i.e., vertical lifts only, and personnel must believe their indications and stop if the indications don't make sense. It is always better to stop when an operation is not going as planned or an unexpected indication is observed (spike on a load indicator). In most cases, the gear and equipment is extremely reliable; however, a crane malfunction can lead to a significant accident. Operators must be prepared to respond quickly in order to secure the crane/equipment to minimize the impact of the failure.

DROPPED LOADS

Accidents: While turning a component 180 degrees using a Category 3 crane, the component shifted in the rigging and dropped six inches to the shop floor, causing damage to the component. During installation of a capstan bearing ring, an incorrectly sized and un-torqued swivel hoist ring pulled out of its attachment point, allowing one side of the bearing ring to drop several inches. During an in-hull rigging operation, a component was being rigged out when a part of the suspended component fell off. The shift in the component's center of gravity made the component unstable in the rigging. The part was not adequately secured.

Lessons Learned: Two of the reported dropped load accidents occurred as a result of improper rigging. Another accident resulted from inadequate equipment inspection. These causes can be eliminated if personnel slow down and remember to perform a thorough inspection of their equipment prior to conducting the lift and then inspect it again once the load has been rigged. Specifically, look for operations where frapping should be used (e.g. for components/equipment with a high center-of-gravity) to prevent a rigged component from shifting and falling out of the rigging. Additionally, personnel should inspect the equipment being lifted in order to ensure that all components are secure and cannot fall off the rigged equipment.

TWO-BLOCK

Accidents: The boom point and sheaves of a mobile crane were damaged when the crane was two-blocked. The crane was equipped with an anti-two-block (A2B) function and safety bypass switch, both of which were tested satisfactorily.

Lessons Learned: Operators must ensure that operational safety devices are working properly and these devices are not by-passed. The operator should never rely on the use of A2B devices to stop the crane from two-block conditions. The operator must be vigilant during operation to ensure that the hoist's block has sufficient clearance to avoid a two-block and the rigger-in-charge must continually observe the load and rigging to ensure it is hoisted in a slow and

controlled manner. These actions, along with ensuring constant communications are established between the operator and rigger-in-charge, help ensure a lift is completed safely. Ensuring the safety by-pass switch is in the proper position is a critical task of the operator.

Similar to last quarter, over 45 percent of reported crane accidents involved a collision between the load or crane and another object. It cannot be stressed enough that personnel need to proceed at a pace conducive to the work environment. Avoid complacency and maintain situational awareness in and around the operating envelope. Prior to movement, the crane and load travel paths should be inspected to ensure that safe travel can be performed. Pay particular attention to work being performed in the operating area of the cranes, especially building cranes. Several inside shop crane accidents occurred as a result of facility maintenance work (new piping, wiring, and ventilation) that had penetrated the operating envelope of the crane.

NEAR MISSES

Activities are continuing to submit quality near miss reports that are undoubtedly having a positive impact on accident prevention. The number of near miss reports submitted during the second quarter is consistent with those reported in the previous quarter, but the majority of reports (77 percent) are in the area of crane operations. Although rigging accidents have declined in FY14 compared to this same period in FY13, the number of significant rigging accidents increased this past quarter compared to the previous quarter, suggesting the need to increase observations and focus in this area. The majority of near miss reports involved deficiencies that were unsafe acts, suggesting that personnel are more involved in watching ongoing weight handling operations and directly contributing to the prevention of accidents. The number of near miss reports continues to rise in the area of operations, but the reports also suggest a need to focus on equipment and facility inspection and maintenance. Several crane collisions occurred during the past quarter as a result of inadequate crane clearance that was not identified during facility or equipment inspection. Another area requiring attention is evolutions that involve the handling of shore power cables. Personnel have been standing under the heavy cables and there have been instances where the cables were not adequately controlled. Lastly, several instances were reported that involved personnel walking into or turning into a crane's hook or gear. Activities should stress the importance of utilizing personal protective equipment at all times and reiterate the need for situational awareness in a repair and industrial environment.

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. The increase in significant rigging accidents and crane collisions indicates a need to focus on slowing down and performing detailed inspections in all facets affecting weight-handling operations. Taking the time to be safe can increase our productive support to the fleet. Our goal remains to decrease significant accidents by identification of deficiencies, properly assessing those issues in order to formulate appropriate corrective actions and subsequent feedback to the activity and Navy weight handling community. ■

TIP OF THE SPEAR
(Notable Evaluation Items and Focus Areas)

SECNAVINST 11260.2 tasks the Navy Crane Center with evaluating Navy shore-based weight handling programs biennially at a minimum to ensure compliance with Navy weight handling program requirements. For those activities with a high tempo of operations and those involved in critical weight handling operations, such as lifting ordnance, naval nuclear propulsion materials or other items where a high degree of reliability is required, an annual evaluation is prescribed. Currently, there are over 410 Navy shore activities with weight handling programs.

Due to the number of activities reviewed each year, the on-site portion of the evaluation is of relatively short duration (a half-day to four days depending on the size and scope of an activity's program). For this reason, as you are aware, our evaluation teams request a large amount of material in advance of the on-site portion of the evaluation (a self-assessment, local instructions, equipment inventories, surveillance and internal audit data, staffing, etc.). This information is reviewed ahead of time to get a better understanding of your activity and, more importantly, to assist us in the early identification of potential problem areas and areas for improvement. The key component of this advance material is your activity's self-assessment. An inwardly focused, self-critical assessment serves two key purposes. First, personnel in your weight handling program should be aware of the problems and challenges faced on a day-to-day basis and can provide valuable insight and recommendations to improve your overall program. Second, as stated above, our teams are only at your activity once a year or once every two years for a very short period and it is critical that each activity have a program that embraces continuous incremental improvement. A primary method to achieve this desired end state is to have a "healthy" self-critical approach within all levels of your program to assist in the identification of weaknesses and areas for improvement. For this reason, self-assessment should be an ongoing process and not just something done in advance of our visit.

To demonstrate the importance of this area, we include our evaluation of your self-assessment in the Executive Summary of our report and often include a stand-alone report item when self-assessments miss the mark and are not proactively identifying the activity's top problem areas. In too many cases, activities lack the fundamental tools to develop a good self-assessment. As a result, the self-assessment either re-states weaknesses identified during the previous evaluation, identifies external weaknesses or problems that are not under the activity's responsibility and cognizance, identifies significant events that "found" the activity without any documented precursors, or at worst, identifies no problem areas or weaknesses. The below discusses Navy Crane Center's views on these specific types of self-assessment weaknesses.

- Restating weaknesses identified during previous evaluation(s): Even though some significant items identified during previous evaluations may require several years to see substantial improvement, you do not need to restate these weaknesses in the current self-assessment. The evaluation team is already aware of these weaknesses. In these instances, the evaluation team is going to focus on the specific actions taken and, more importantly, the results obtained since the last evaluation.

- Including external weaknesses/concerns not under the activity's cognizance: Although in some cases it may be prudent and necessary to document an external weakness or problem not under the cognizance of your activity, this is not the intent of the "self" assessment. If it is documented and if included, it should be a significant item that is impacting your program. Additionally, the evaluation team will be focusing on the actions that your command has taken to formally address this "top" concern with the cognizant activity.
- Listing a significant event that "found" the activity: Although in some cases it is appropriate to include this type of event in your activity's self-assessment, in most cases, the event itself is not the "true problem." Instead, the self-assessment should focus on the actual problem (underlying causes) that resulted in the significant event.
- Identifying no areas of concern: Although rare, this is the worst type of self-assessment. The lack of any self-assessment items indicates that the activity does not embrace a self-critical culture and as a result, is not aware of the vulnerabilities it faces on a day-to-day basis. Expect our evaluation teams will look closely at your programs and for the evaluation to focus on the lack of a good self-assessment. Additionally, the evaluation team often identifies a lack of supervisory and management involvement at activities where no concerns were identified.

So what makes a good self-assessment? Better quality self-assessments are developed from several fundamental program tenets, including but not limited to: (1) data collected from oversight/observation (surveillance) programs, (2) internal audits and reviews, (3) metrics, (4) changes in mission/workload, (5) changes in organizational structure/manning/budget constraints, (6) external reviews from chain of command, (7) significant events, and (8) other external reviews.

Although all eight of the above items should be considered when developing your self-assessment, items (1), (2), and (3), if used effectively, are the major building blocks of a good self-assessment since they are truly pro-active looks at your program. If done correctly, actions can be taken to address these issues before more significant events occur. Items (4) and (5) can be viewed as either proactive or reactive. If viewed proactively, i.e., actions are taken prior to the concerns affecting your program, this is healthy. However, a reactive approach to these problems can often lead to a significant decline in your weight handling program. Similarly, item (6) can be viewed as proactive or reactive Navy Crane Center highly recommends that immediate superiors in command (ISIC) or major claimants conduct periodic program reviews at a frequency opposite our scheduled evaluation (e.g., for an annual activity, perform program reviews six months prior to/following our evaluation) to evaluate the status of their activities' weight handling programs and to check on the progress of corrective actions. Although self-assessments are required, it is not as healthy to only review programs when they are in extremis or after a significant event or marginally satisfactory/unsatisfactory evaluation. Items (7) and (8) are always reactive; however, this information still forms a basis for your self-assessment. Your challenge here is to effectively use the inputs available from sources (1) to (6) to avoid having to include sources (7) and (8) items in your self-assessment. Additionally, with regard to items (7)

and (8), if significant events have occurred or significant problem areas are identified during external reviews, but there is no corresponding available activity information, or if information was available but the negative trend not identified, it is important that the activity review it's processes for gathering, reviewing, and analyzing data to understand why these weaknesses were not unidentified.

With regard to oversight/observation (surveillance) programs, please refer back to our "Tip of the Spear" article from the March 2014 edition of the Crane Corner. The highest quality self-assessments that we review are developed by activities that have a robust, self-critical surveillance program. Remember, to be truly effective, your self-assessment process should not be something you develop once a year (or every two years) in preparation for your evaluation. Keep your top concerns/items visible all year long and update them regularly with their status and actions taken. Look forward to the day to removing one of your concerns/items from the list. However, remember to add another concern in its place! (Hint, always have at least three things that you are working on). Lastly, we highly encourage sharing this way of thinking outside of your weight handling program. This approach, if embraced, can be used to address other program areas such as safety or production, which ultimately, can also improve your weight-handling program.

ACQUISITION UPDATES

The Navy Crane Center accepted one 15-ton rated capacity, one 5-ton rated capacity, and three 2-ton rated capacity bridge cranes at a new facility. The 15-ton and one of the 2-ton cranes are top running, single girder, bridge design with an underrunning trolley and hoist. The 15-ton crane has a bridge span of 36 feet and a maximum hook height of 34 feet 9 inches. The 2-ton rated capacity crane has a bridge span of 30 feet 5 inches and a maximum hook height of 22 feet 2 inches. The remaining two 2-ton and the 5-ton cranes are underrunning single girder bridge design with an underrunning trolley and hoist. The 2-ton cranes are located on the same runway and have a bridge span of 50 feet 4 inches and a maximum hook height of 19 feet 9 inches. The 5-ton crane has a bridge span of 22 feet 3 inches and a maximum hook height of 19 feet 6 inches. All of the cranes are electrically powered, controlled from a suspended pushbutton station, and were designed and fabricated to comply with ASME B30 and CMAA requirements. The runways and runway rails for the top running bridge cranes were installed by the facility contractor. The runways for the underrunning bridge cranes were installed by the crane contractor. Navy Crane Center participated in early planning sessions for the facility, and facility design reviews and provided guidance on facility structural steel and electrical power distribution to ensure seamless incorporation of the new cranes into the facility.

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 standalone, 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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