EVALUATIONS

The evaluation component of our mission continued to drive improvements in the overall quality and safety of weight handling programs at Navy shore activities and operating units and reinforce the requirements of NAVFAC P-307. Our evaluation teams provide a rigorous compliance and program review that is focused on identifying process problems to better enable the activity to perform thorough self-assessments and to determine effective long-term corrective actions. This evaluation process (along with the integral coaching assistance that occurs during the evaluation) has continued to improve weight handling programs and maintain the reliability of equipment in the Navy shore establishment**.**

Weight handling equipment is owned or operated by over 400 Navy shore activities and shore based operating units worldwide. During FY13, our evaluation teams completed 169 Navy weight handling program evaluations. Our responsibilities, per SECNAVINST 11260.2A, include evaluating all activity weight handling programs every two years at a minimum and suspending unsafe crane operations if necessary.

The Navy Crane Center has five evaluation teams to perform our scheduled evaluations. Each team is comprised of a team leader and two to three equipment specialists with equipment or rigging and operations backgrounds. Evaluation teams 1, 2 and 3 are stationed at Navy Crane Center Headquarters, team 4 is stationed in Silverdale, Washington, and team 5 is stationed in San Diego, California. Additionally, to increase overall flexibility and focus, in FY12 we created two lead equipment specialist positions; one individual serves as the Compliance Division lead equipment specialist for all weight handling equipment issues within the Division and the other is assigned as the lead Navy Crane Center point of contact for Seabee-related weight handling program matters. These positions were created by reducing two of the five evaluation teams from four to three personnel.

In the latter part of 2007, we expanded the focus of our evaluations. Starting with the naval shipyards, we enhanced our evaluation process to include in-depth reviews of staffing and succession planning, resource management, strategic planning, etc. In 2009, we utilized this enhanced evaluation process in all of our evaluations. By increasing the focus on program management issues, Navy shore activity weight handling programs are further strengthened for the long term.

With the success of the expanded program evaluations at shipyards, NAVSEA 08 is no longer reviewing lifting and handling during their biennial reviews. Instead, a NAVSEA 08 representative has been attending Navy Crane Center evaluations on a biennial basis since the beginning of 2009.

The quality of weight handling programs at Navy shore activities remains high. One key metric used is the percentage of activity programs that are satisfactory and in basic compliance with NAVFAC P-307 requirements. In FY13, there were only three activities whose weight handling programs were evaluated as unsatisfactory. Some activity

programs had declined from their previous evaluation. Where the decline was significant, the activity was given a summary evaluation of marginally satisfactory. In FY13, 11 programs were evaluated as marginally satisfactory.

The condition of sampled cranes is another metric for evaluating the quality of weight handling programs. Shore based weight handling activities have demonstrated continued excellent performance with 83 percent of the sampled cranes being satisfactory, up from 79 percent in FY12. In addition, we continued to strongly encourage Navy shore activities to review their crane utilization and remove unneeded cranes from service wherever possible and develop a crane replacement and modernization plan to ensure future weight handling requirements are addressed. Some activities with small inventories of little-used cranes were able to deactivate their inventories and thus avoid the cost of maintaining a weight handling program.

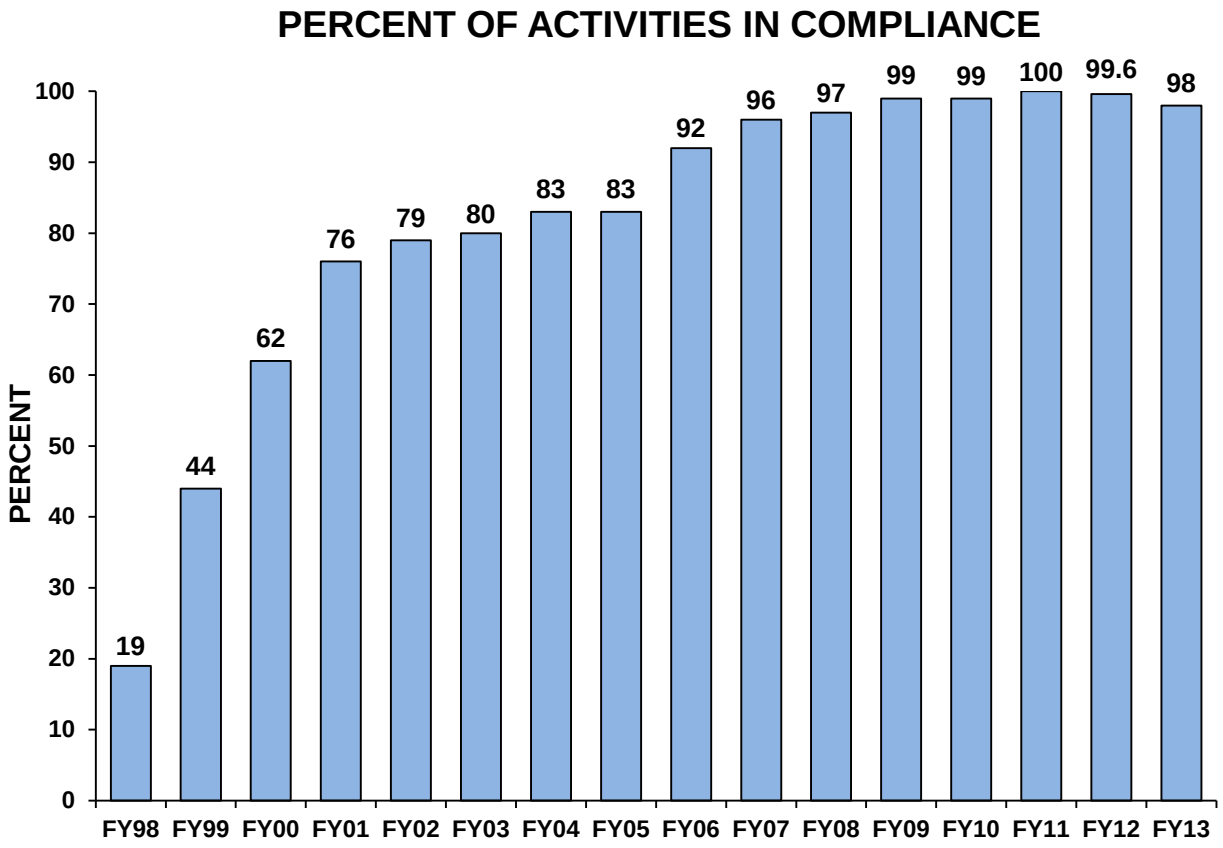
The most common category of evaluation finding in FY13 was the significant numbers of unsafe acts found by the evaluation teams during waterfront and shop surveillances. The evaluators' ability to readily detect these "tangible deficiencies" in the short time of the evaluation highlights the need for activities to become more proficient at finding and preventing them. The evaluation teams stressed the importance, and the benefits, of a locally-developed documented oversight (surveillance) program to improve operational safety.

The Navy Crane Center also performed weight handling program evaluations at Newport News Shipbuilding, Electric Boat Corporation, and the Naval Reactors Facility, Idaho, three non-Navy organizations which support the Naval Nuclear Propulsion Program (NNPP). These evaluations ensure that Navy weight handling standards are maintained at all activities that conduct NNPP work. Reduction in weight handling equipment accidents, standardization among naval shipyards, and sharing of best practices were major areas of focus at each organization. In FY11, Naval Reactors mandated that the laboratories utilize NAVFAC P-307 as the standard for management of their weight handling programs. In FY13, we conducted our first ever weight handling program evaluations at the three DOE laboratories that now fall under NAVFAC P-307.

Activity Program Compliance Progress

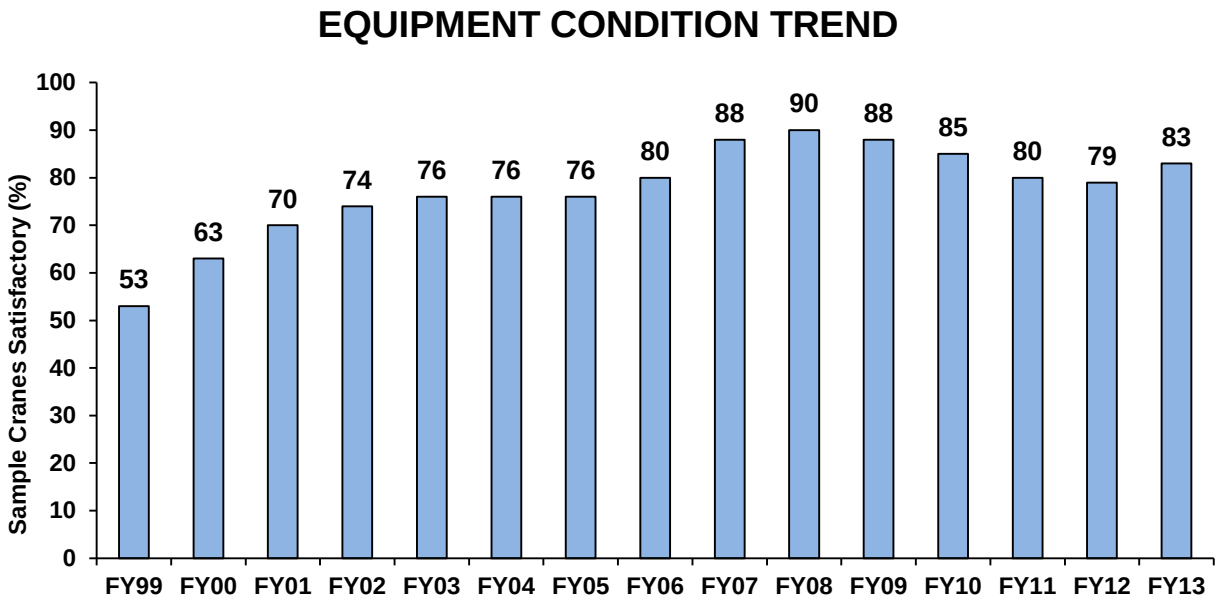
At the conclusion of each evaluation, we provide the activity a summary rating of satisfactory or unsatisfactory. Those satisfactory activities that nonetheless have significant issues to address (as a result of deterioration in their program, factors from our expanded evaluation focus, loss of key personnel, etc.) are adjudged marginally satisfactory. Unsatisfactory activities receive a follow-up review (approximately six months after the unsatisfactory evaluation) to evaluate progress in addressing their significant issues. Revisits to marginally satisfactory activities are dependent on the significance of the issues identified and their evaluation periodicity (annual or biennial).

Of the 169 Navy activities evaluated in FY13, 91 percent were fully satisfactory (fundamentally sound), 7 percent were marginally satisfactory, and only 2 percent (3 activities) were unsatisfactory. The overall positive performance in activity compliance with NAVFAC P-307 requirements is a major improvement from the initiation of the evaluation program in FY98 when only 19 percent of activities evaluated were fundamentally sound.



Equipment Condition-Cranes

In FY13, the evaluation teams inspected 241 cranes out of an inventory of approximately 5,100 active Navy-owned cranes in service. In FY13, the satisfactory rate increased to 83 percent. The rate of satisfactory evaluated sample cranes was 53 percent when the evaluation program began.



Unsatisfactory Cranes

Reasons for unsatisfactory cranes included the following:

- Ten cranes had hoist brake air gaps/torque springs out of specification.
- Five cranes had other components out of proper adjustment/specification.
- Four cranes had load test deficiencies.
- Three cranes had oil film on brake surface.
- Two cranes had cracked couplings.
- Two cranes had noisy motors.

Program Management Issues

As stated earlier, our evaluation teams have expanded the scope of evaluations to include more in-depth looks into overall program management. Although the majority of weight handling programs are well managed, some activities still have challenges. At activities that are operated by base operating service (BOS) contractors, a common thread for good programs was a strong government oversight program of contractor performance. However, in a few instances our evaluation teams identified activities where the proper level of government oversight was lacking, resulting in weak overall program performance. Similarly, these activities have also had difficulty in properly overseeing (non-BOS) contractor crane operations at their activity. Our evaluators focused heavily on both of these related issues. During FY13, our evaluation teams continued their focus on the utilization of self-critical assessment and internal surveillance programs which have proven effective at many activities in reducing weight handling accidents. At activities where operations and services were performed in-house, the better activities have developed a strong surveillance program and are internally self-critical in all areas of their weight handling programs.

In FY13, the overall fiscal constraints presented some unique challenges to our evaluation teams. We directed the evaluation teams to intensify their reviews of program management issues, with particular focus being placed on key vacancies and gapped positions due to the hiring freeze, as well as increased workload due to overall manning decreases, furloughs, and overtime restrictions. At some activities, the tolls of these policies were evident and these issues and concerns were emphasized in our evaluation reports. Additionally, in some cases where the significance warranted, our management separately contacted the affected activity's immediate superior in command to further elevate the issues.

Some activities are still not taking full advantage of recent changes to NAVFAC P-307 that targeted reducing maintenance costs based on thorough detailed analysis of maintenance and reliability data throughout the Navy's shore based weight handling program. Our evaluation teams have focused heavily on these cost avoidance initiatives, while stressing the importance of having a feasible crane replacement and modernization plan to address future weight handling needs.

Over the past few years and continuing into FY13, our evaluations teams increased their focus with regard to the oversight of contractor cranes due to an increase in accidents associated with contractor cranes. We have seen a 30 percent reduction in reported contractor crane accidents from FY10 numbers.

Accidents involving the use of multi-purpose machines, forklifts, and construction equipment to lift suspended loads continued to be of concern. Due to an increase in the use of these machines as substitutes for cranes to lift suspended loads and the problems associated with these operations, the December 2009 revision to NAVFAC P-307 included these machines in our program when the machines are used to lift suspended loads. Additionally, rigging gear used with these machines is now required

to be NAVFAC P-307 compliant and personnel performing the rigging must be trained. This area has been a focal point of our evaluations during the past year as significant problems continue to be identified. As stated in the previous paragraph, a strong government oversight program is critical to mitigate risk and to minimize hazards to Navy property and personnel.

Lastly, a few activities were identified with inadequate category 3 crane operations programs. Common problems seen at these activities included improperly performed crane pre-use checks, the lack of category 3 crane hands-on training following formal training, and operations weakness due to a lack of proficiency (often as a result of too many operators). The December 2009 revision to NAVFAC P-307 requires category 3 crane operators to retake the required training course every three years. This requirement is helping to address this weak area for the long term; however, our evaluation teams still identified some activities that were not aware of the requirement.

Equipment Issues and Deficiencies

In general, maintenance, inspection, testing, engineering, and certification of cranes in FY13 were satisfactorily conducted. Common engineering issues included Navy Crane Center comments to crane alteration requests (CARs) not acknowledged and incorporated, and conditionally approved CARs not resubmitted. Common maintenance and inspection issues included inconsistencies in the performance and documentation of maintenance and inspections, poor or no documentation of specific work performed, and past crane alterations not recognized by inspection personnel. Common test deficiencies included knowledge deficiencies in specific brake testing and errors in brake specification tolerance ranges. Common certification issues include weak review by the certifying official and inattention to detail in the certification documentation.

Common Operations and Rigging Gear Deficiencies

Continued emphasis in safe rigging and crane operations is important to safe weight handling operations. The number of rigging gear deficiencies noted during the evaluations continued to be small compared to the total inventory of rigging gear in the NAVFAC P-307 program. The preponderance of rigging gear deficiencies were the first two items noted below. All damaged rigging gear met the rejection criteria of NAVFAC P-307, the original equipment manufacturer (OEM), or ASME B30 and were no longer safe for use. Most of the noted deficiencies should have been detected by a proper pre-use inspection of the gear. As stated above, due to an increase in the use of multi-purpose machines, forklifts, and construction equipment as substitutes for cranes to lift suspended loads and the problems associated with these type operations, the December 2009 revision to NAVFAC P-307 included these machines in our program when the machines are used to lift suspended loads and the rigging gear used is now required to be NAVFAC P-307 compliant. Additionally, personnel performing the rigging using this type equipment must be trained. A concerted effort by the Navy shore weight handling community is required to continue rigging and operations improvements by maintaining a strong command focus on this critical weight handling area.

In FY13, many activities have taken positive action in recognition of conditions where overloading of the crane or rigging gear is possible due to binding conditions. This is due in part to Change 3 of NAVFAC P-307 which better aligned the complex lift requirements of NAVFAC P-307 and NAVSEA OP-5. Additionally, improved communications between Navy Munitions Command; NAVSEA Packaging, Handling, Storage and Transportation Center; Navy Crane Center and activities that handle munitions resulted in the forming of a Cross Functional Team (CFT) for the safe lifting and handling of ordnance. This CFT facilitates improved communications and better understanding of potential problems in the ordnance environment and establishes a formal method to address and resolve technical differences and misunderstanding of weight handling issues. Because of rapid improvement in load indicating device (LID) technology, commands may not be fully aware of, or are not taking advantage of, the new options these weight load indicators offer. In order to ensure wide distribution of this information, Navy Crane Center evaluators emphasize the benefits of this new technology during program evaluations and encourage activity weight handling managers to invest in LIDs to benefit from the safety that the LID can provide.

The most common operations deficiencies were the following:

Crane Team Performance Issues: In weight handling operations that involved crane teams, deficiencies were identified in crane team member coordination, track walker performance, and in the overall control of the lift by the rigger-in-charge (RIC). Additionally, instances were identified where RICs performed work that could have been performed with other available personnel, distracting them from their primary role of overall control of the operation. In some instances supervisors were observed performing work, compromising their oversight role. This has been a primary focus area for our evaluation teams and, as a result, many activities have improved performance in this area.

Control of the Crane Operating Envelope: Deficiencies consisted of: (1) items being left in the travel zone or working zone of the crane, and (2) unauthorized personnel not being prevented from entering the crane operating envelope, resulting in the load being passed over their heads.

Category 3 Crane Operations: As discussed above, significant weaknesses continue to be identified during observation of category 3 crane operations and pre-use inspections, such as: omitting or improperly performing required pre-use checks, checking upper limit switch operation at high speed, traveling into crane stops at high speed, securing the crane and leaving the hook block lowered as a potential obstruction, stowing the hook by engaging the upper limit switch, making lifts without knowing load weights, and leaving suspended loads unattended. A cause of numerous crane accidents was side loading during lifts, resulting in miss-spooled and damaged wire rope. Our evaluation teams identified an increase in miss-spooled cranes during FY13; we will be increasing our focus in this area in FY14.

Lifting Bound or Constrained Loads: Deficiencies included crane teams not using load indicating devices (LIDs) during lifts; not including appropriate stopping points to prevent overload of the crane, rigging gear, or item being lifted; and lack of a finite means of hoisting, such as using a chainfall.

The most common rigging gear deficiencies were the following:

Damaged Rigging Gear: Gear with deficiencies that met rejection criteria of NAVFAC P-307 was the most common rigging gear finding in FY13. Synthetic sling damage included embedded metal shavings, snags, cuts, abrasions, and cuts to the outer and inner covers of the synthetic round slings exposing the inner core material. In many instances, damage was due to inadequate chafing protection, the selection of improper rigging gear for the job at hand, and in some cases, the damage was due to improper storage of the slings when not in use. The evaluation team continued to stress the importance of investigating the circumstances that resulted in the damage and reporting any events that constituted crane or rigging accidents or near-miss events.

Rigging Gear Not in Any Program: This included gear that arrived on base without the knowledge of the weight handling managers.

Unmarked Rigging Gear: Gear not marked in accordance with NAVFAC P-307.

Out-of-Date Rigging Gear: Gear that was available for use or was actually being used past the marked inspection due date. No segregation of out-of-date gear or gear not in the program.

Inadequate Use of Chafing and Cutting Protection for Slings: Significant problem area which resulted in numerous crane accidents. Focus area of our evaluation teams during observation of inside shop, pier side, and in-hull rigging.

Improperly Tested Gear: Rigging gear tested with incorrect test loads, test loads not applied for proper length of time, and required tests not performed.

Hooks: Damaged hook latches or hooks without latches that were not approved by the activity engineering organization.

Hoists: Failure to comply with Crane Safety Advisories 88 and 121A relating to chain hoists and electric powered hoists.

Wire Rope Slings: Swaged fittings made of materials other than steel. Improper swaging.

Eyebolts: Spacers that were not the proper diameter or were greater than one thread pitch in thickness. Eyebolts were incorrectly modified without engineering authorization. Nuts that were improperly used. Lifts out of the plane of the eye or lifts at angles that exceeded OEM limitations for use.

Swivel Hoist Rings: Swivel hoist rings not tightened to OEM torque specifications during installation or used in configurations that exceeded OEM limitations for use.