Personnel Working Aloft

Prepared for: Regional Maintenance Centers by NRMC
References


- NAVSEA S0400 AD URM 010/TUM, Tag Out Users manual

- Joint Fleet Maintenance Manual (JFMM)

- 29 CFR Part 1915, Occupational Safety and Health Standards for Shipyard Employment
Purpose: To establish awareness of aloft program procedures for “all personnel” working aloft aboard ships during maintenance availabilities. This includes personnel from Alteration Installation Teams (AIT), Systems Commands, Ship's Force, Commercial Industrial Services (CIS), and Fleet Maintenance Activities (FMA).

Background: During an availability period, some repairs require personnel to go aloft to perform material inspections, remove or install components, perform tests and troubleshooting and perform structural repairs or preservation. Aloft program requirements are in place to mitigate the risk to personnel with regard to falls, rotating equipment and radiation hazards.
Ship’s Force is 100% responsible for controlling aloft zones via the shipboard Personnel Working Aloft instruction. (HOWEVER, Ship’s Force can only control aloft zones for personnel working aloft when personnel follow established shipboard aloft procedures.) A short summary of the procedures is as follows:

– The Combat Systems Officer of the Watch (CSOOW) is the single point of contact and facilitator for the approval process of personnel working aloft. The Command Duty Officer is the final authorizing authority. For aloft program administration issues, the CSOOW reports directly to the Electronic Materials Officer (EMO) or Combat Systems Officer (CSO) depending on class of ship.
No person is allowed to enter an aloft zone for any reason without first obtaining permission via the CSOOW.

The CSOOW will initiate a Personnel Working Aloft authorization process beginning with a checklist that contains all of the safety requirements for working in specific aloft zones.

Departments involved shall ensure that all radio transmitters, radars, engineering exhausts and other systems that pose hazards are placed in the stow/off position and a conspicuous placard is placed on the equipment control panel that reads:

"SECURED. PERSONNEL ALOFT. DATE_______
TIME_______ INITIALS________."
• Depending on specific shipboard instruction requirements and situations, some systems posing hazards to personnel will be tagged out with a red DANGER tag IAW ship’s working aloft instructions and shipboard tag-out program instructions (vice using temporary placards).

• During the approval process, SF personnel will acquire acknowledgment signatures from the Officer of the Deck of ships in the vicinity. This is to ensure that they too, take appropriate action concerning their operation of electrical or electronic equipment.

• Prior to commencement of work in aloft zones and every 15 minutes thereafter, the ship will pass a verbal warning over the announcement system that personnel are working aloft.
Procedure Summary

• All activities performing work aloft are required to follow shipboard instruction precautions. Specifically, they shall:

  – Review and sign the shipboard checklist/alof request. Discuss with SF the location of work and verify that all affected equipment is secured prior to going aloft.

  – Verify that appropriate placards have been placed over equipment that must be placed in the “STOW/OFF” position,

  – Use a parachute type safety harness with a DynaBrake safety lanyard, working lanyard, and climber safety device when going aloft where a climber safety rail is installed. (If a climber safety rail is not installed, use a double lanyard configuration).
Conduct safety briefing at the aloft location with involved personnel prior to going aloft. Discuss requirements for lanyards on tools, positive control of attachment points, etc.

Position a safety observer on deck near the work being performed.

Outfit the safety observer with a safety harness, lanyards, Dyna Brake, and climber safety sleeve to permit rapid emergency assistance aloft if required.

Ensure that the safety observer keeps the deck area beneath the work aloft free of unnecessary personnel and maintain effective communication with personnel working aloft.
• Verify with the CSOOW prior to going aloft each time to ensure conditions have not changed (e.g. after breaks and lunch). Ensure safety observer is in place prior to going aloft.

• Workers will request tags to be cleared and sign required blocks on the Tag out record Sheet (TORS) and WAF when going aloft is no longer required.
• Any activity other than SF performing shipboard work during an availability must first have authorization through a Work Authorization Form (WAF) process. This applies to all U.S. Naval ships in all types of maintenance availabilities, public and private.

(Detailed WAF program training is included separately as part of the Integrated Project Team Development (IPTD) brief series however, it is important to mention the WAF process in this brief as it integrates with the Personnel Working Aloft process.)

• The Work Authorization Form process is managed by the Lead Maintenance Activity (LMA) using Vol 1 of the JFMM or NAVSEA Standard Item 009-106.
Activities are required to submit a WAF prior to commencing any work during an availability. The WAF Coordinator will ensure that all blocks of the form are completed with the correct information. One of the more important blocks on the form is Block 9 (Restrictions/Cautions/Remarks). This is where Personnel Working Aloft requirements would be indicated.

Once Block 9 of the WAF indicates requirements for working aloft, the CSOOW becomes part of the WAF approval process. Final WAF authorization will not be given by SF until aloft requirements are verified as met and signed off by the CSOOW.
In closing:

- It is paramount that the Lead Maintenance Activity (LMA) takes proactive measures to ensure that all contractors and workers under their cognizance are aware of the requirements of the references on slide 1 of this brief.

- Likewise, the Naval Supervising Authority (NSA) shall take the same proactive measures for involved government agencies and the LMA.

- Individual workers, regardless of the organization they represent, should take personal responsibility in being familiar with the hazards of working aloft.
• 20 Sep 2012: During a pier side availability on a DDG in Norfolk, seven FMR personnel were exposed to radiation from SPY-1D RADAR System while performing work on SLQ-32 cutout switches.

• While there were many failures in decision making and following procedures leading to the incident, these were most notable:
  – **Complacency and/or lack of awareness!** It appears that there was a combination of both in this case. SF *assumed* personnel were clear from the array decks before transmitting. Some FMR personnel *assumed* that the radar was secured while others were unaware of dangers of RF in the area they were working in.

• **What SHOULD HAVE happened:**
  – FMR personnel **SHOULD HAVE** checked in with CSOOW prior to entering array decks to perform work. This work required the setting of aloft.
  – SF personnel **SHOULD HAVE** performed a safety check to ensure array decks were clear prior to transmitting the radar. There is no written procedure for clearing the decks however, during a CMAV, non-SF personnel are all over the ship performing repairs. An apparent loss of situational awareness.