From: Chief of Naval Operations

Subj: OPERATION AND MAINTENANCE POLICY FOR SHORE-TO-SHIP POWER

Ref: 
(a) OPNAVINST 5450.338
(b) OPNAVINST 5450.339
(c) OPNAVINST 5450.348
(d) UFC 4-150-02, Dockside Utilities
(e) Submarine Maintenance Standard MS N0.3240-081-089 (NOTAL)
(f) UFC 3-560-01, Electrical Safety O&M
(g) OPNAVINST 3500.39C
(h) NAVFAC Electrical SAFE; PW Portal, FM&S PL (NOTAL)
(i) Naval Engineering Training and Operating Procedure and Standard (NETOPS) #29, Shore-to-Ship Power Connect and Disconnect Procedures of 6 January 2015

1. Purpose

   a. To provide minimum operation and maintenance procedures and equipment specifications for electrical systems which provide shore-to-ship power.

   b. This revision consolidates redundantly captured technical details from the previous version of this instruction, and various standard operating procedures (SOP) into a new enclosure (1). Roles and responsibilities are also redefined in to clarify responsibility for resourcing the procurement and maintenance of portable power cable assemblies, and to ensure that the stakeholders collaborate among themselves during revision of the applicable references. This is a complete revision and should be reviewed in its entirety.

2. Cancellation. OPNAVINST 11310.3B.
3. **Scope and Applicability.** Applies to all utilities distribution systems where Commander, Navy Installations Command (CNIC) or Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) is assigned as the maintenance unit identification code, to all Strategic Systems Programs facilities, and to all naval shipyards and intermediate maintenance facilities. Specifically, this instruction applies to components of the electrical distribution system from, and including, the facility shore power circuit breaker to the cable termination (connector) that plugs into the shipboard shore power receptacle.

4. **Background.** Enclosure (1) from OPNAVINST 11310.3B has been deleted and four additional SOPs in references (d), (f), (g), and (i) are included to cover the deleted areas. The safe and reliable operation of shipboard electrical equipment is critical in port as well as at sea. A malfunction or misapplication of shore-to-ship power equipment could cause at least an inconvenient interruption of electrical service to a ship at berth. At worst, it could threaten the lives of personnel, damage critical shipboard and shore power equipment, or completely disable a ship. References (a), (b), and (c) establish Chief of Naval Operations (CNO) policy and command responsibility for Navy controlled land and shore facilities. Reference (d) addresses specific elements that must be included in each activity's shore-to-ship power operation and maintenance program. Recent failures of shore power critical components have necessitated compliance with specific inspection procedures for submarines identified in reference (e). Electrical safety requirements and guidelines for safe practices to be followed during operation and maintenance are provided by references (f), (g), (h), and (i).

5. **Action**

   a. **Echelon 2 Commands**

      (1) Ensure that subordinate shore activities and applicable fleet units develop a shore-to-ship power operation and maintenance program conforming to references (a) through (i).
(2) Assess waterfront facilities as they relate to shore-to-ship power. Develop and execute projects to correct identified deficiencies.

b. Commanders of Forces Afloat

(1) Establish standards for shipboard personnel for the checkout and connection of the power cables on-board ship and ensure that subordinate units apply the standards.

(2) Recommend required changes to shipboard operating procedures in support of the shore-to-ship power operating procedures established by this instruction.

(3) Resource the procurement and maintenance of portable shore power jumper assemblies, also referred to as pigtails, to support standardization of shore-to-ship power cable assemblies.

(4) Resource the procurement and maintenance of portable power cable assemblies within ship maintenance activities.

c. COMNAVFACENGCOM

(1) Record shore-to-ship electrical power outages, investigate cause and recommend corrective actions for the design, operation, and maintenance of shore-to-ship power systems to reduce occurrences.

(2) Provide support to Commander Naval Sea Systems Command (COMNAVSEASYSCOM) for the identification and solution of interface problems between ships' electrical distribution systems and shore power systems.

(3) Coordinate any revisions related to the applicable shore power references with commanders of forces afloat and gain endorsement from COMNAVSEASYSCOM for any changes.

d. COMNAVSEASYSCOM

(1) Provide the formal documentation to COMNAVFACENGCOM which identifies ship power system design and all alterations that may affect shore-to-ship power services.
(2) Plan and execute the procurement and maintenance of portable power cable assemblies within naval shipyards.

e. CNIC. Resource the procurement and maintenance of portable power cable assemblies; excluding the assemblies within naval shipyards.

6. **Training.** Training programs will be developed and tracked in Navy Training Management and Planning System for all ship and shore based personnel involved in the operation and maintenance of shore-to-ship power systems. The program will include the installation, fabrication, assembly, and testing of low and medium voltage cable, splices, terminations, connectors, switchgear, and receptacles, where applicable. Navy sponsored training courses and manufacturers' training will be used to the maximum extent possible to supplement local training. Safety training shall be included and emphasized by all cognizant commands. Fleet commanders will establish standards for personnel working on shore-to-ship power systems. The activities will maintain training records and conduct bi-annual refresher training programs.

7. **Deviations**

a. Commanding officers of CNIC installations and assigned special area facilities of CNIC installations must establish reference (i) as the minimum standard for shore power connections and disconnections. Any deviation from procedures outlined in reference (i) involving energized work will require a local SOP approved by the COMNAVFACENGCOM Facility Engineering Command (FEC) commanding officer, in writing, and endorsed by the installation commanding officer or by direction only. In a like manner, use of a local SOP for shore-to-ship power connect or disconnect other than reference (i), will require prior approval, in writing, by the COMNAVFACENGCOM FEC commanding officer and endorsed by the installation commanding officer or by direction. Such approvals should ensure that the requested deviation, or use of a local SOP, meets or exceeds the standards established by reference (i) for shore power connections and disconnections, including standards for employee training and job planning.
b. For new ships, cognizant CNO warfare sponsor approval is required for deviations which do not meet the criteria in references (a) through (d).

c. For existing ships, deviations from criteria in references (a) through (d) must be accomplished following departure from the specification chapter of the COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual, volume V, part 1. Copies must be provided to the CNO warfare sponsor and Office of the Chief of Naval Operations, Director Fleet Readiness Division (OPNAV (N43)).

d. All waiver requests must be submitted via the normal chain of command. CNO waiver requests will be addressed to the appropriate CNO warfare sponsor, copy to OPNAV (N43).

8. Records Management. Records created as a result of this instruction, regardless of media and format, must be managed per the Secretary of the Navy Manual 5210.1 of January 2012.

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