

Navy Public Works Center
Detachment Philadelphia
STANDARD OPERATING PROCEDURE

Working Near Energized Electrical Equipment
Less Than 600 Volts

PROCEDURE NUMBER 500.45

DISCLAIMER: These Standard Operating Procedures (SOP) are for the exclusive use of NAVY PUBLIC WORKS CENTER (PWC) NORFOLK DETACHMENT PHILADELPHIA. They are promulgated as guidance for other NAVFAC COMMANDS. If intended to be used by other Activities, they must be tailored to each Activities particular requirement and must be reviewed/approved by the activities Safety Professionals prior to use.

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(Date)

**NAVY PUBLIC WORKS CENTER
DETACHMENT PHILADELPHIA
STANDARD OPERATING PROCEDURE
WORKING NEAR ENERGIZED ELECTRICAL EQUIPMENT
600 VOLTS OR LESS**

Procedure Number 500.45

A) PURPOSE: to establish a standard at all NPWC Philadelphia Detachment sites for the proper working procedures when a properly trained and qualified, electrician, electrical worker, electrical planner and estimator or an electrical inspector 's duties ask them to perform a task, job, troubleshoot, install, maintain, repair or inspect etc. near energized electrical equipment (600 Volts or less). The procedures and employees work practices shall follow the below :

References:

1. CFR1910.333
2. CFR1910.147
3. OPNAVINST 5100.23F CHAPTER 24
4. PWCNORVAINST 5100.33F CHAPTER 24
5. PWCPHILA. ENERGY CONTROL INSTRUCTION

B) GENERAL: It is NPWC DETACHMENT PHILADELPHIA'S intent to have all electrical workers (as per paragraph C) perform their duties only on DE-ENERGIZED equipment by rendering all electrical equipment de-energized, inoperative and safe by using electrical safe work practices and energy control devices as stated in references 1 through 5. When off site work is required it is the responsibility of the Site Manager and or the off site supervisor to ensure the employees follow and obtain all necessary procedures and protective equipment.

C) QUALIFIED - ELECTRICIANS, ELECTRICAL WORKERS, ELECTRICAL PLANNERS AND INSPECTORS: Are persons that have been properly trained (documented) in the practical and safe work practices, know the hazards associated with, and possess knowledge of the magnitude and dangers of electricity.

D) WORKING NEAR (600 Volts or less) ELECTRICAL ENERGIZED EQUIPMENT: When work is near enough (within three feet) to workers to expose the employees to any electrical hazard.

Examples of this work includes, but is not limited to:

1. Removing Covers to panels, panel boards, switches, junction boxes, circuit breakers etc.
2. Installing switches, panels, circuit breakers, covers or disconnects etc.
3. Trouble Shooting on any electrical circuit
4. Inspecting any electrical circuit for certification and or planning and estimating purposes
5. Any work inside a panel, panel board, disconnects switch or junction box etc. etc.
6. Performing any maintenance or repairs near any energized electrical equipment.

E) PROCEDURES: Supervisors are responsible to check / inspect/ verify each electrical job (as per paragraph D), to ensure the proper PPE (as per paragraph G) is available and used properly, and employees understand and comply with these procedures.

When employee's (as per paragraph C) duties call for work (as per paragraph D) near 600 Volts or less energized electrical equipment he / she is responsible for the following:

1. Obtain and read job and project safety plans. This material can be obtained through the supervisors, planning or safety departments.
2. Familiarize self with location of job. This can be accomplished while/ during the initial job scope or planning stages.
3. Read all Standard Operating Procedures that pertain to his immediate duties. The SOPS are available through the supervisor or planning department.
4. Obtain all necessary Personal Protective Equipment to accomplish the job, SAFELY. All necessary PPE is available in tool rooms in Philadelphia sites One and Two. Offsites PPE is available through immediate Site Manager and supervisors.
5. Before any work is to start the employee must test and verify all circuits to determine circuits are de-energized.
6. Notify supervisor when work is to commence and upon completion.
7. No PWC employee shall wear any type of jewelry when performing electrical work.

F) LOCKOUT AND TAG OUT:

1. While any employee is exposed to contact with parts of fixed energized electrical equipment or circuits, the circuits shall be locked and tagged out as per References 1 through 5.
2. Conductors and other parts of electric equipment that have been de-energized BUT have not been locked out in accordance with references 1 through 5 shall be treated as energized parts.
3. Control circuit devices such as push buttons, switches and interlocks may not be used as a substitute for lockout and tagout. .

G) PERSONAL PROTECTIVE EQUIPMENT:

- **The following personal protective equipment must be used when a worker (as per paragraph C) performs any duty (as per paragraph D) near energized electrical equipment of 600 volts or less.**

1. 1000 volts certified rubber-insulating gloves with leather protectors.

The employee and Supervisor must ensure the following:

- Must be kept in tool room at Philadelphia sites one and two.
 - Offsite supervisor has control of gloves and protectors
 - Must be inspected and field tested before each use.
 - May only be checked out of the tool room for one (1) shift period.
 - Must be laboratory tested every six months.
 - Must be immediately turned in to tool room or supervisor if damaged.
 - Must be stored properly in protective bag when not in use.
 - Must sign log book - when gloves are checked out prior to starting job and returned upon completion of job.
 - Must have a serial PWC #
2. **Hard Hat - Electrical rated, safety**
 3. **Safety Glasses - Must be worn at all times.**
 4. **Electrical rated protective sleeves - Available in tool room and or supervisor.**
 5. **Rubber and or insulating blanket material - this material is in the tool room and covers any exposed equipment.**
 6. **Safety Shoes - Electrical rated**

7. Nomex - Shirt, coveralls or jackets etc. (to be determined by supervisor).