



City of Seattle City Light Department

DEPARTMENT POLICY & PROCEDURE

Subject

SAFETY WATCH

Number

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of

1.0 PURPOSE

- 1.1 To establish the role and responsibility of Department personnel assigned to Safety Watch duty.
- 1.2 To establish procedures for the safe performance of work by non-electrical Department employees whose duties require access to or work within and/or around Department energized high-voltage facilities.

2.0 DEFINITIONS

- 2.1 Barricade. A physical obstruction such as tape, cones, or A-frame type wood or metal structure intended to provide a warning about and to limit access to a hazardous area.
- 2.2 Barrier. A physical obstruction which is intended to prevent contact with energized lines or equipment or to prevent unauthorized access to a restricted work area. Metal -clad equipment, shielded cable, plastic and steel duct shall be considered as barriers.
- 2.3 Electrical Supervisor. The supervisor having jurisdiction over a given location and particular branch of the electrical trades (e.g., Substation Supervisor, Generation Supervisor, Network Supervisor).
- 2.4 Energized High Voltage Facilities. Any of the Department's electrical generating facilities, substations, switchyards, high-voltage vaults, maintenance holes and distribution and transmission lines and equipment.
- 2.5 High Voltage. 601 volts and above.
- 2.6 Safety Watch. A Department employee who is:
 - 2.6.1 A Journey-level electrical worker per WAC 296-45 in the craft appropriate for the location where non-electrical work is being performed;
 - 2.6.2 Trained and experienced as specified by §8.0 of this policy;
 - 2.6.3 On the current Approved Clearance Holders list; and

2.6.4 Assigned to a Department job site for the purposes of providing additional security for the safety of the non-electrical employee(s) from electric hazards and ensuring the integrity of the equipment and electrical system.

2.7 Department. The Seattle City Light Department.

2.8 Non-electrical worker - employee(s) who are not directly involved with energized high voltage work.

3.0 ORGANIZATION/PERSONNEL AFFECTED

3.1 City Light Department

3.2 All City Light employees including non-electrical employees working in and around energized high voltage facilities.

3.3 All Safety Watchers

4.0 POLICY

4.1 It is the policy of the Department to promote and protect the safety of its employees, through conformance with federal, state, and local safety codes, rules and regulations, during the inspection, construction, reconstruction and/or maintenance of Department electrical facilities, such as any powerhouse, substation, switchyard, vault, maintenance access or location containing energized lines or equipment.

4.2 When non-electrical employee(s) are required to work in the vicinity of energized equipment, the following policies shall apply. These policies are listed in descending order of preference.

4.2.1 Non-electrical employees shall work no closer than those minimum distances specified in the WAC 296-24-960 (3) or 296-155-428 (1) (see Appendix) unless the non-electrical employee is working with and under the direct supervision of a journeyworker.

4.2.2 If 4.2.1 is not feasible, a clearance shall be issued if possible and clearance procedures shall be followed. Practicality/feasibility of a clearance shall be determined by an electrical supervisor or designee as outlined in §2.6 of this policy, and the System Control Center Outage Dispatcher.

4.2.3 If 4.2.2 is not feasible, then approved barriers shall be put in place.

4.2.4 A Safety Watch will be provided when non-electrical workers are unable to work at distances significantly further than those minimum distances specified by Chapter 296-24-960 (3) or 296-155-428 (1), for the duration of the job.

4.3 When access into a confined space is necessary, SCL's Confined Space Entry Policy DPP II-228 shall apply and must be followed.

5.0 RESPONSIBILITIES OF THE SAFETY WATCH

5.1 The primary responsibility of the assigned safety watch is to ensure whenever practical that no employee comes closer to energized high voltage than the distances specified in the WAC 296-24-960 (3) or 296-155-428 (1).

5.1.1 The safety watch has the authority and responsibility to determine safe working distances.

5.2 The assigned Safety Watch shall hold briefings with the non-electrical employee(s) at the job site before the work begins, at the start of each work day, and each time a work location changes. Additional briefings shall be held if significant changes occur during the course of the work.

- 5.2.1 The briefing shall cover the hazards associated with the work being performed, work procedures, special precautions, energy source controls, required personal protective equipment, the location of and minimum distances from energized equipment in or adjacent to the work area, and the limits of any de-energized work area. The Safety Watch Checklist for Non-Electrical Workers - 408L shall be used.
- 5.2.2 Employees shall be instructed not to bring themselves, equipment or materials closer to energized lines or exposed energized parts of equipment than specified during the pre-work conference.
- 5.3 If a clearance has been taken, the assigned Clearance Holder shall explain the limits of the clearance and shall ensure that the appropriate Safety Check Clearance Procedure form is signed by the employee(s). The Clearance Holder shall ensure that all applicable clearance procedures are followed.
- 5.4 If the work is to be performed in a confined space, the employee assigned as Safety Watch shall also be responsible for monitoring all confined space set-up procedures and shall ensure that those procedures will be followed until all personnel are out of the confined space.
- 5.5 The Safety Watch shall remain in the area such that a clear, unobstructed view and verbal communications and/or hand signals can be maintained with the non-electrical employee(s), and the work being performed can be monitored on a continuous basis.
- 5.6 In order to prevent injury, electrical contact, and/or damage to the electrical system components, the Safety Watch shall have authority to construct approved barriers or barricades before beginning safety watch duties and/or instruct, warn, and if necessary, order the employee(s) to:
 - a) Move away from the electrical system components;
 - b) Modify work practices on site; and
 - c) Stop work.
- 5.7 If instructions/orders are not followed and work continues, the Safety Watch shall immediately notify the appropriate electrical supervisor, crew chief, or journeyworker.
- 5.8 When assigned as a Safety Watch, the journey-level worker will be non-working other than as a Safety Watch.

6.0 RESPONSIBILITIES OF SUPERVISORS AND/OR CREW CHIEFS

- 6.1 When work is to be performed per §4.0 of this policy, the supervisor/crew chief of the non-electrical employee(s) or the Project Manager/Engineer shall take the necessary steps to ensure the safety of his/her employees and shall be responsible for the following:
 - 6.1.1 Contacting the appropriate electrical supervisor or crew chief to schedule the work of non-electrical employee(s) at any Department energized facility;
 - 6.1.2 Conducting a pre-work briefing (on site) with the appropriate electrical supervisor or crew chief, and station operator if available and applicable, to determine if a Safety Watch is needed, and/or making the appropriate arrangements to ensure the assignment of a Safety Watch;
 - 6.1.3 Ensuring that non-electrical workers are certified as trained in "Electrical Hazard Recognition."
 - 6.1.4 Instructing the non-electrical employee(s) when and what work can be performed when the Safety Watch is not present at the work site; and
 - 6.1.5 Informing the assigned Safety Watch when work is complete and that the assigned Safety Watch can be released to other duties.

- 6.2 The supervisor/crew chief of the assigned Safety Watch shall ensure that the employee assigned as Safety Watch has sufficient training and experience to ensure the safety of the non-electrical employee(s) and the integrity of the electrical system, and shall be responsible for the following:
- 6.2.1 Assuring that the employee(s) assigned as Safety Watch is (are) on the current approved Clearance Holders list;
 - 6.2.2 Determining the number of Safety Watch personnel required for work to be done safely and ensuring that the employees assigned as Safety Watch shall be available as needed to allow the work to proceed on schedule; and
 - 6.2.3 Assuring that the employee(s) assigned as Safety Watch shall not be assigned any other work when performing the duties of the Safety Watch.
 - 6.2.4 Ensuring that the high voltage distance provisions of 296-24-960 (3) and/or 296-155-428 (1) are complied with.

7.0 RESPONSIBILITIES OF THE NON-ELECTRICAL WORKER

- 7.1 Non-electrical employees working under the direction of a Safety Watch shall follow the Safety Watcher's instructions at all times.

8.0 TRAINING

- 8.1 Journey-level electrical workers assigned as Safety Watch shall have a working knowledge of this policy.
- 8.2 Journey-level electrical workers shall participate in at least three safety watch assignments under the direct supervision of an experienced safety watch. Training assignments shall range from small scale jobs involving few non-electrical workers relatively far from exposed high voltage to large jobs involving numerous non-electrical workers relatively close to exposed high voltage. Participation means doing all research and preparation work, requesting clearances as needed and establishing and thoroughly checking out the safe work zone and work requirements or restrictions for non-electrical workers.
- 8.2.1 Documentation of such shall be available for inspection.

9.0 APPENDIX

- 9.1 Distribution: All Department Policy and Procedure Manuals.
- 9.2 This policy is posted on SCL's WEB page.
- 9.3 WAC 296-24-960 (3) General requirements - high voltage lines. (a) Minimum clearance, and WAC 296-155-428 General requirements (1) Protection of employees. (e)
- (ii) For lines rated 50 kv. or below, minimum clearance between the lines and any part of the equipment or load shall be 10 feet.
 - (iii) For lines rated over 50 kv. minimum, clearance between the lines and any part of the equipment or load shall be 10 feet plus 0.4 inch for each 1 kv. over 50 kv., or twice the length of the line insulator but never less than 10 feet.