Standard Operating Guideline – (SOG)

Title: **ELECTRICAL DISTRIBUTION SYSTEM MAINTENANCE**

District Name: _____

Date Prepared: _____ Date Revised: _____

OBJECTIVE:

To ensure adequate safety to persons engaged in maintenance and operation of electrical distribution facilities.

RATIONALE / PURPOSE:

An effective switch maintenance program is essential to:

- Ensure electrical distribution system reliability
- Develop predictive maintenance programs
- Determine capital improvement budgeting
- Develop loss trend analysis
- Ensure system isolation capability

METHODS / PROCEDURES:

The following methods and procedures are recommendations that illustrate methods used by the electrical industry for electrical distribution system facilities.

Plan for the Maintenance and Operation of an Electrical Distribution System

Guidelines for maintaining and operating records for electrical distribution system should include:

- Overhead and underground line inspection and maintenance records, including pole inspection and line patrol records
- Substation inspection and maintenance records
- Recloser and sectionalzer records
- Line voltage regulator records
- Distribution transformer records
- Service interruption reports and summaries of experience
- Up-to-date system maps
- Emergency Restoration Plan

SAFETY CONSIDERATIONS:

Effective maintenance and operation of electrical facilities can help to prevent damage to property, environment, and injury to the public and employees by:

- Precluding electrical equipment and distribution system damage
  - Inspection and Testing frequency
    - Visual observations
    - Mechanical and Electrical Testing
- Facilitating Operations & Maintenance personnel safety
  - Identify safe work practices
    - Identify hazards
    - Switching Lockout/Tag out
    - Safety signs and/or warning lights

COST BENEFIT:

- Reduce system failure
- Avoid costly repair and replacement
- Create a manageable capital improvement budget
- Enhance system reliability

INSPECTION FORMS / CHECKLISTS / DOCUMENTATION/ASSETS:

- Electric Distribution Facilities Inspection Interval
- Pad Mounted Transformers

REFERENCES:

Electrical work shall comply with the latest revisions to the following codes and standards:

A. National Electrical Code (NEC) - National Fire Protection Association (NFPA) No. 70
B. National Electrical Safety Code (NESC) - ANSI C2
C. NFPA 70E- Standard for Electrical Safety Requirements for Employee Workplaces
D. California Public Utility Commission General Orders 95, 128, and 165
E. Cal OSHA 8CCR – 2299-2599 (Low Voltage) and 2700-2889 High Voltage
   Title 8, Division 1, Chapter 4, Subchapter 5 (Electrical Safety Order)
   Group 1 Low Voltage, Group 2 High Voltage safety Order
F. Occupational Safety and Health Act (OSHA)
   -Title 29 CFR 1910 Subpart S - Electrical
   -Title 29 CFR 1926 Subpart K, Subpart V - Electrical
G. Relevant DOE Orders - Chapter 16, Paragraph M
H. Inter National Electrical Testing Association (NETA) Section 7
I. Electric Distribution Procedures

J. Inspection Record keeping

TESTIMONIALS:

- The following benefits were experienced when a detailed Electric Distribution Facility Program had been established: