

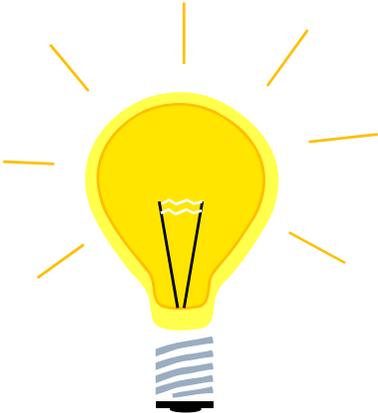


CPUC  
505 Van Ness Avenue  
San Francisco, CA 94102

107 S. Broadway, Rm. 5109  
Los Angeles, CA 90012

**California Public Utilities Commission**

**UTILITIES SAFETY BRANCH  
ELECTRIC SAFETY REPORT  
FOR 1997**



*Enforcing safety regulations and promoting safety for the general public.*



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## **MEMORANDUM**

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This annual report of Electric Safety presents an account of various activities carried out under the California Public Utilities Commission's (CPUC) electric safety program for the 1997 year.

The CPUC has been entrusted with the safety jurisdiction over all electric and communication overhead and underground facilities in the state by Legislative mandate. It is responsible for enforcing safety regulations, inspecting all work affected by the statutes and making necessary additions and changes to regulations for public safety, worker safety, and system reliability. The electric safety program consists of administration of General Orders (G.O.) 95, 128, 165, and Sections 315, 768, from 8026 through 8038, and from 8051 through 8057 of the Public Utilities Code.

The State of California has the nation's largest electric and communication system. Therefore, it is important to maintain an adequate level of inspections and surveillance to ensure that these systems are designed, constructed, operated, and maintained properly in accordance with the regulations for safety of the general public. The CPUC's Utilities Safety Branch (USB) implements the safety program by carrying out accident investigations, follow-up investigations, compliance inspections, review of utilities' reports and records, construction inspections, and special studies.

### **ACKNOWLEDGMENT**

This report was prepared by Winnie Ho, Assistant Utilities Engineer, under the general direction of Raffy Stepanian, Senior Utilities Engineer, of the Utilities Safety Branch, of the Consumer Services Division. The staff also acknowledges the assistance provided by utilities and agencies in furnishing data necessary for this report and expresses its appreciation for their cooperation.

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# INTRODUCTION

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## A. PURPOSE OF REPORT

The purpose of this report is to document administration of General Order (G.O.) Number 95, “Rules of Overhead Electric Line Construction”; G.O. No. 128, “Rules for Construction of Underground Electric Supply and Communication Systems”; and G.O. No. 165, “Inspection Cycles for Electric Distribution Facilities” for the 1997 year as reported by utility companies and as accomplished by the Utilities Safety Branch staff. It also provides general information on the utility companies and statistical data on incidents and investigations related to electric lines and other safety activities during the 1997 year.

## B. CPUC’s RESPONSIBILITIES

The above General Orders were adopted by the California Public Utilities Commission (CPUC) pursuant to Public Utilities Code §8037 which grants the Commission authority to “inspect all work which is included in the provisions of this article, and ... make such further additions or changes as the commission deems necessary for the purpose of safety to employees and the general public”. USB staff performs inspections to enforce G.O. 95, 128, and 165. An overview of each general order is listed below.

### 1. General Order 95 . . . . .

G.O. 95, “Rules for Overhead Electric Line Construction”, became effective July 1, 1942 replacing G.O. 64 which had been in effect since 1922. It is periodically revised to reflect development of new materials and standards for line construction and changing operational practices. The latest edition is dated 1998. It’s purpose is to formulate, for the State of California, uniform requirements for overhead electrical line construction, the application of

which will insure adequate service and secure safety to persons engaged in the construction, maintenance, operation or use of overhead electrical lines and to the public in general.

G.O. 95 also applies to cable television (CATV) facilities. Since November 13, 1986, the Commission has had jurisdiction to regulate safety of cable antenna television corporations (PU Code Section 215.5 and 768.5).

## **2. General Order 128** . . . . .

G.O. 128, “Rules for Construction of Underground Electric Supply and Communications Systems”, became effective December 12, 1967. Changes have been made as noted in the order. The latest edition is dated 1998.

The purpose of G.O. 128 is to formulate, for the State of California, uniform requirements for underground electrical supply and communication systems, the application of which will insure adequate service and secure safety to all persons engaged in the construction, maintenance, operation or use of underground systems and to the public in general.

## **3. General Order 165** . . . . .

G.O. 165, “Inspection Cycles for Electric Distribution Facilities”, became effective March 31, 1997, and has not yet been revised.

The purpose of this general order is to establish minimum requirements for electric distribution facilities, regarding inspection (including maximum allowable inspection cycle lengths), condition rating, scheduling and performance of corrective action, record keeping, and reporting, in order to ensure safe and high quality electrical service, and to implement the provisions of Section 364 of AB 1890, Chapter 854, Statutes of 1996.

#### **4. Incident Investigation & Customer Complaints • • •**

Besides enforcing the general orders, USB staff conduct investigations of reportable incidents from the utility companies. Section 315 of the Public Utilities Code provides that the Commission shall investigate the cause of accidents occurring upon the property of any utility. Reportable incidents, as stated in Decision No. 94-02-015, Appendix A, Page 4, are those: “(a) resulting in fatality or personal injury rising to the level of in-patient hospitalization and involving utility owned facilities, or (b) are of significant public attention or media coverage and involve utility owned facilities”.

Subsequent to the above decision, the Commission has issued Decision No. 98-07-097, Appendix B, which now includes reportable incidents as those that “involve or allegedly involve trees or other vegetation in the vicinity of power lines and result in fire and/or personal injury whether or not in-patient hospitalization is required”.

The USB staff also handles all safety related customer complaints pertaining to G.O. 95 and 128. This may range from answering an inquiry by telephone or correspondence to conducting a formal investigation.

#### **C. CAVEAT**

The information contained in this annual report were provided by the various utility companies in California. All reasonable efforts have been made to ensure that the statistical material contained herein is accurate.

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## UTILITY COMPANIES UNDER THE JURISDICTION OF THE CPUC

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The CPUC has been granted the authority by the Legislature to adopt and enforce requirements of G.O. 95, 128, and 165 on publicly owned utilities. There are a number of publicly owned power and communication utility companies within the state and those owned by municipalities with districts formed under the provisions of various laws of the State of California and cooperatives.

### A. POWER COMPANIES



#### 1. Southern California Edison Company

Edison International's largest subsidiary is Southern California Edison (SCE). SCE is one of the nations' largest electric utilities, serving more than 4.4 million customers in a 50,000-square-mile area within Central and Southern California.



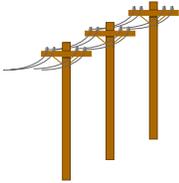
#### 2. Pacific Gas and Electric

Pacific Gas and Electric (PG&E) provides electric service to about 11 million customers. Its service area spans 70,000 square miles, including all or portions of 48 of California's 58 counties.



### **3. San Diego Gas and Electric**

San Diego Gas and Electric (SDG&E) provides electric service for the San Diego and portions of Orange county. It serves approximately 1.17 million customers.



### **4. Other Investor Owned Companies**

These companies also provide electric service to the people of California.

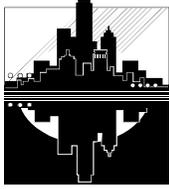
- Bear Valley Electric
- Kirkwood Gas & Electric
- PacifiCorp
- Sierra Pacific



### **5. Electric Cooperatives**

These electric co-operatives provide service to certain California customers.

- Anza Electric Cooperative
- Plumas-Sierra Rural Elect. Coop
- Surprise Valley Electrification Corp.
- Valley Electric Association, Inc.



## 6. Municipalities

These California municipalities provide electric service to their customers.

- Alameda
- Anaheim
- Azusa
- Banning
- Biggs
- Burbank
- Coalinga
- Colton
- Glendale
- Gridley
- Healdsburg
- Imperial Irrigation District
- Lassen Municipal Utility Dist.
- Lodi
- Lompoc
- Los Angeles
- Modesto Irrigation District
- Needles
- Northern Cal. Power Agency
- Oroville-Wyandotte Irrigation District
- Palo Alto
- Pasadena
- Redding
- Riverside
- Roseville
- Sacramento Municipal Utility District
- San Francisco
- Santa Clara
- Shasta Lake
- So. Cal. Public Power Authority
- Tri-Dam Project
- Trinity County
- Truckee Donner Public Utility District
- Turlock Irrigation District
- Ukiah
- Vernon

## B. COMMUNICATION COMPANIES



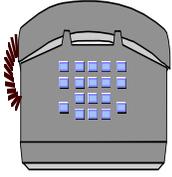
### 1. Pacific Bell

PacBell has a total of 17.9 million access lines including residential, commercial, and others. They provide telephone service to approximately 51,000 square miles in California.



### 2. General Telephone Electronics

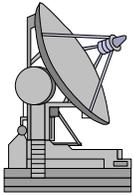
In 1997, GTE had a total of 3.19 million access lines which include residential, commercial, and others. GTE has approximately 19 percent of California's total number of access lines.



### **3. Others**

There are 21 other companies that provide telephone service in California that are under the jurisdiction of the USB. These companies have overhead equipment that are inspected by the USB for compliance with G.O. 95.

## **C. CABLE TELEVISION**



There are many cable television companies serving California cities. They range from local companies serving one city to larger companies that may serve several cities. A majority of the cable television companies are members of the California Cable Television Association (CCTA). CCTA represents over 250 cable television systems which provide cable television service to over 6 million California homes.

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# ANNUAL ELECTRIC REPORT

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The USB enforces General Orders 95, 128, and 165 by conducting periodic inspections of both overhead and underground electric and communication lines throughout the state. This involves both field inspections and review of office records. Furthermore, the USB investigates accidents involving overhead and underground electric and communication lines as mandated by Public Utilities Code Section 315, to determine whether they were caused by a failure to comply with the General Orders. This section contains information and statistical data on the various electric safety activities conducted by the USB in 1997.

## **A. GENERAL ORDER 95 INSPECTIONS**

For G.O. 95 overhead line inspection, staff either conduct a walking inspection (walkout), joined by utility workers, or a drive through "windshield" inspection that seeks to define an area most in need of remediation. In urban areas, more walkouts are done, whereas in rural areas, more windshield inspections are conducted. The inspections generally cover 2 miles of pole line per day, for three days in a particular geographic area.

The walkout is usually planned at one utility's office to determine the areas to inspect. The area is chosen based on whether the poles are located in the front or rear of the property, which utilities are on the poles, volume of traffic, age or condition of facilities, and how recently an area has been inspected before. We request that all utilities participate in the walkout to foster cooperation between USB and the utilities and to expedite remediation by having their personnel take notes and agree on who will fix an infraction.

During the walkout, the staff engineer writes notes about infractions found on the overhead electric system which includes poles, conductors, and all overhead equipment. This gives a general impression of the quality of a utility's workmanship and maintenance programs. After

the walkout is completed, the USB sends each utility a letter noting the infractions found and a deadline of usually 3 to 6 months to correct them.

A windshield inspection covers more territory and requires 2 inspectors. One inspector drives and one takes notes. Though it is a general sampling, the windshield inspection tries to find the areas where more infractions are present. Upon that determination, the inspectors take notes about specific infractions, which will be used later to re-inspect and determine compliance with a USB directive to correct G.O. 95 infractions in an area. The inspector then maps out the area to inspect and sends notice to all utilities involved to meet and conduct their own walkout inspection, with a 3 to 6 month completion deadline. Again, about 2 miles of pole line per day for 3 days is chosen.

A file is kept on each area inspected for a period of 3 years. There are lists kept in both Los Angeles and San Francisco, showing the areas where inspections have occurred for the last several years. This list is used as a basis to determine future inspections. In some years the USB has concentrated more on urban areas, or rural areas, or municipal utilities, depending on complaints, failures, or time since last inspection.

In 1997, USB was divided into four units. Each unit was assigned specific counties in which to conduct G.O. 95 inspections. The following lists the counties each unit covered.

**Unit 1:** Alameda, Amador, Butte, Contra Costa, Del Norte, El Dorado, Humboldt, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Sierra, Siskiyou, Solano, Sutter, Tehama, Trinity, and Yuba.

**Unit 2:** Alpine, Calaveras, Colusa, Glenn, Lake, Marin, Mendocino, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Sonoma, Stanislaus, Yolo.

**Unit 3:** Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Monterey, Mono, San Bernardino, San Luis Obispo, Santa Barbara, Tuolumne, Tulare

**Unit 4:** Imperial, Los Angeles, Orange, Riverside, San Diego, Ventura

# 1. Utility Data

Utilities	Total Miles of Overhead Lines	Transmission Lines (miles)	Distribution Lines (miles)	Number of Poles
PG&E	108,574	18,517	90,057	2,344,000
SCE	210,700	42,500	168,200	1,498,745*
SDG&E	8,519	1,622	6,897	232,882
Sierra Pacific	1,156.92	245.19	911.73	22,123
PacifiCorp	3,148	725	2,423	57,479
<b>Grand Total</b>	<b>332,097.92</b>	<b>63,609.19</b>	<b>268,488.73</b>	<b>4,133,106</b>

Table 1. Summary of the Utility Company's Overhead Equipment (\*reflects wood poles only)

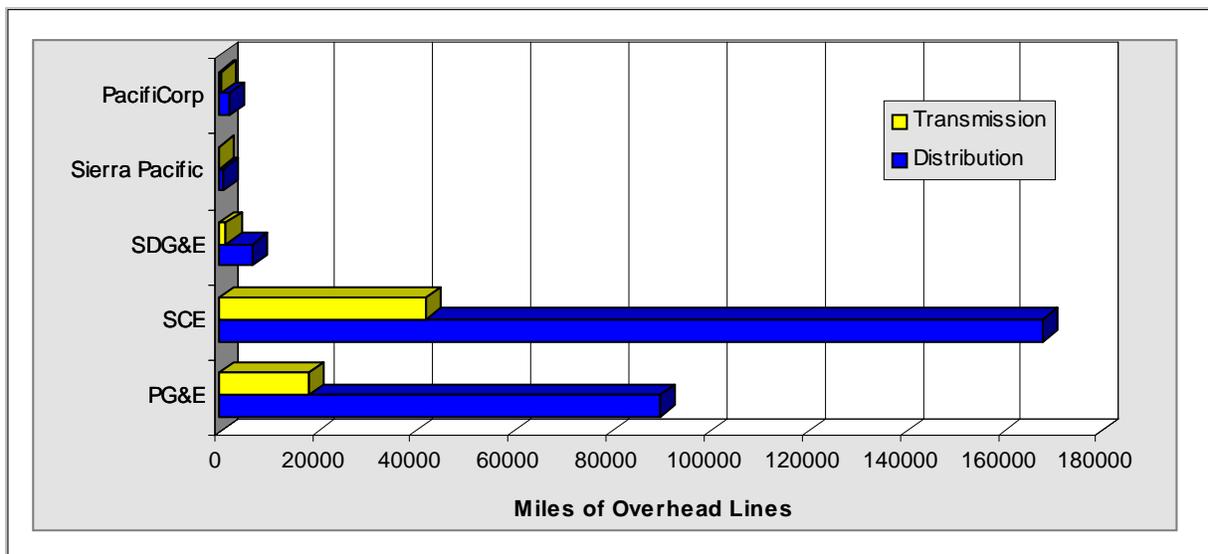


Figure 1A. Number of Miles of Overhead Transmission and Distribution Lines

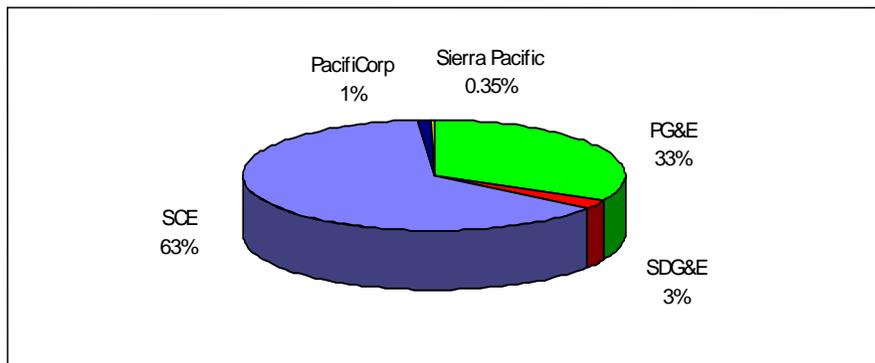


Figure 1B. Percentage of Overhead Lines Each Utility Co. Has In California.

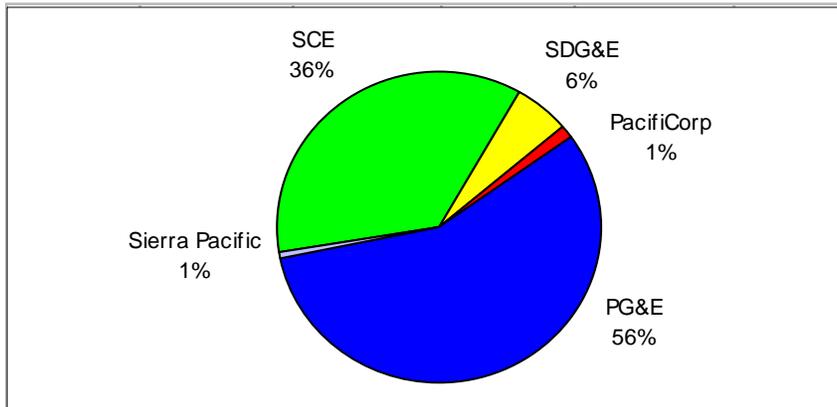


Figure 1C.  
Percentage of Poles  
Each Utility Co.  
Has In California.

## 2. USB Inspection Data

For the 1997 Year	Total
Number of Weeks of Inspection Conducted	40
Number of Inspection Days Used Per Inspection Week	67
Number of Personnel Days Used Per Inspection Week	129
Number of Pole Line Miles Surveyed	1340
Number of Pole Miles Cited	924

Table 2. Summary of the G.O. 95 Inspections Conducted in 1997

For the 1997 Year	Averages
Average Number of Inspection Days Used Per Inspection Week	1.68
Average Number of Personnel Days Used Per Inspection Week	3.23
Average Number of Pole Line Miles Surveyed Per Inspection Day	20
Average Number of Poles Miles Cited Per Pole Miles Surveyed	1.45

Table 3. Tabulation of Averages for G.O. 95 Inspections Conducted in 1997

## B. GENERAL ORDER 128 INSPECTIONS

General Order 128 underground equipment inspections are usually conducted by one inspector, unless a new inspector joins him or her for training. The areas to inspect are determined in a similar way to G.O. 95 inspections. Staff also spend a couple of hours reviewing the records required by G.O. 128 for an auditable and consistent program of inspection. The inspection lasts 3 days and usually occurs in one utility operating district. *G.O. 128 inspections are conducted only with the electric utilities, as communication utilities have less hazards associated with their facilities.* However, the inspector will note problems with the communications facilities and refer them for correction.

The G.O. 128 field inspector joins a qualified utility lineman who opens the live equipment enclosures. The live equipment may be contained inside an underground vault, a walk-in vault, a subsurface enclosure or a pad mounted enclosure. The inspector's notes infractions and afterwards writes up a formal report. The report details the infractions and directs the utilities to correct them and reply by a 3 to 6 month deadline. The records are kept like those for G.O. 95 inspections. Again, each of the for units was responsible for G.O. 128 inspections in its assigned counties.

### 1. Utility Data

Utilities	Total Miles of Underground Lines	Transmission Lines (miles)	Distribution Lines (miles)	No. of Sub Surf Equip. Units	No. of Vaults
PG&E	20,202	100	20,102	not avail.	not avail.
SCE	31,230	230	31,000	94,609	19,082
SDG&E	7,364	40	7,324	81,594	495
Sierra Pacific	153.82	0	153.82	not avail.	not avail.
PacifiCorp	468	0	468	3,079	1,527
<b>Grand Total</b>	<b>59,417.82</b>	<b>370</b>	<b>59,047.82</b>	<b>84,673</b>	<b>21,104</b>

Table 4. Summary of the Utility Company's Underground Equipment

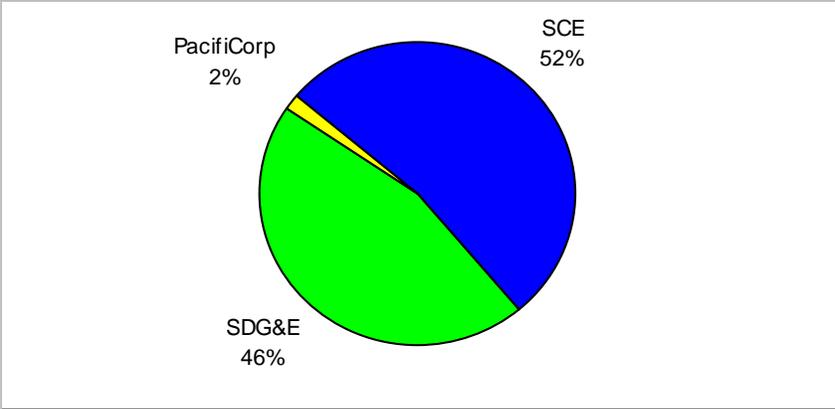
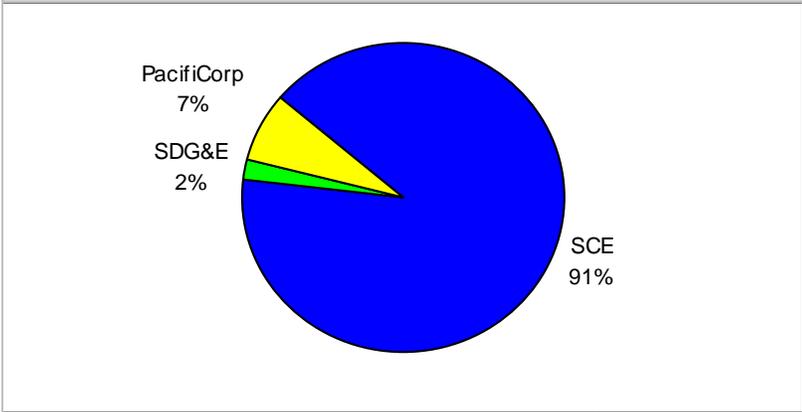


Figure 4A.  
 Percentage of Sub  
 Surface Equipment Each  
 Utility Co. Has In  
 California

\* This figure does not  
 include data from  
 municipalities, PG&E or  
 Sierra Pacific.

Figure 4B.  
 Percentage of Vaults  
 Each Utility Co. Has In  
 California

\* This figure does not  
 include data from  
 municipalities, PG&E or  
 Sierra Pacific.



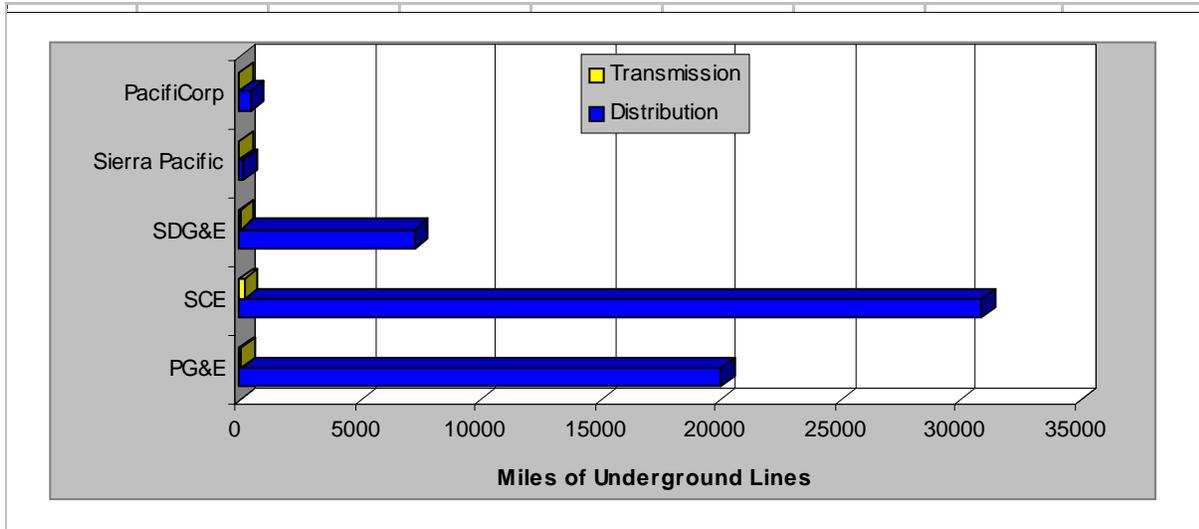


Figure 4C. Number of Miles of Underground Transmission and Distribution Lines

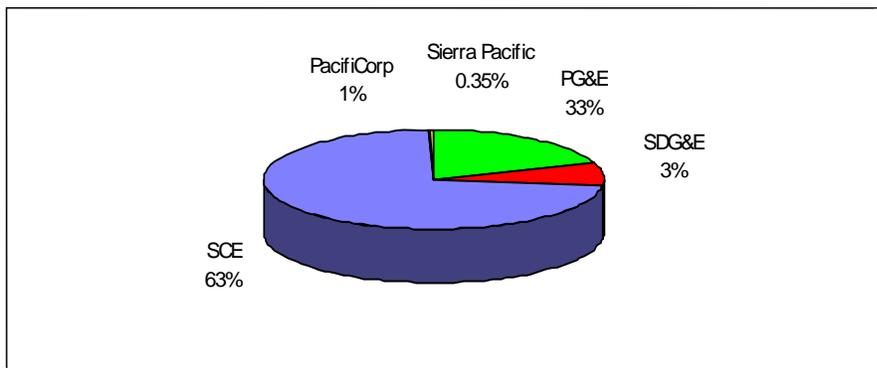


Figure 4D. Percentage of Underground Lines Each Utility Co. Has in California.

## 2. USB Inspection Data

For the 1997 Year	Total
Number of Weeks of Inspections Conducted	23
Number of Inspection Days Used Per Inspection Week	69
Number of Personnel Days Used Per Inspection Week	71
Number of Structures Inspected	778
Number of Violations Cited	581

Table 5. Summary of the G.O. 128 Inspections Conducted in 1997

<b>For the 1997 Year</b>	<b>Averages</b>
Average Number of Inspection Days Used Per Inspection Week	3
Average Number of Personnel Days Used Per Inspection Week	3.09
Average Number of Structures Inspected Per Day	11.28
Average Number of Violations Cited Per Day	8.42
Average Number of Violations Per Structure	0.75

Table 6. Tabulation of Averages for G.O. 128 Inspections Conducted in 1997

### **C. GENERAL ORDER 165 INSPECTIONS**

General Order 165 became effective on March 31, 1997 for Pacific Gas & Electric, PacifiCorp, SDG&E, Sierra Pacific Power Company, and Southern California Edison. This General Order establishes minimum requirements for the inspection and maintenance of electric distribution facilities. The requirements of this order are in addition to the requirements of G.O. 95 and G.O.128 to maintain a safe and reliable electric system.

The inspection procedures have not been formalized but USB is working with the utilities to bring them into compliance with G.O. 165. Once the utilities finalize their plans in accordance with G.O. 165, the USB will schedule follow-up inspections to ensure that utilities are following the inspection intervals, the corrective action criteria, and the record keeping requirements specified in G.O. 165. These inspections may be part of regularly scheduled G.O. 95 or G.O. 128 inspections or may be separate G.O. 165 compliance inspections.

The USB did not perform any G.O. 165 inspections during the 1997 calendar year. Since G.O. 165 became effective on March 31, 1997, and the utilities had one year to comply, there were no records available for auditing in 1997.

## **D. ELECTRIC INCIDENTS & CUSTOMER COMPLAINTS**

The USB staff receives and investigates reportable electric incidents from regulated utility companies. Appendix B of D98-07-097, defines reportable incidents as those which (a) result in fatality or personal injury rising to the level of in-patient hospitalization and attributable or allegedly attributable to utility owned facilities; (b) are the subject of significant public attention or media coverage and are attributable or allegedly attributable to utility facilities; (c) involve or allegedly involve trees or other vegetation in the vicinity of power lines and result in fire and/or personal injury whether or not in-patient hospitalization is required.

The electric utility companies are required to provide notice to designated USB staff within 2 hours of a reportable incident. The notice shall identify the time and date of the incident, the time and date of notice to the Commission, the location of the incident, casualties which resulted from the incident, identification of casualties and property damage, and the name and telephone number of a utility contact person.

The designated USB staff is called the On-Call Engineer (OCE). The OCE is responsible for receiving reportable incidents from the utility companies and he or she is available to do so 24 hours per day. The OCE duties are shared amongst the USB staff. Each staff engineer assumes the OCE duties for an entire week (including weekends) several times per year. The OCE or a staff engineer may go out to investigate incidents at any hour, including weekends. If it is determined that a G.O. violation was involved, staff writes up a report and recommends action against the utility.

In addition, the staff maintains a data base of outages and accidents to note trends. If there is significant trending, the staff will investigate and work with utilities to correct the problem. The data base has been very useful in noting trends in manufacturer defects, lack of tree trimming, or lack of preventive maintenance. The Commission has initiated Orders Instituting Investigation (OII) based on the supporting data and investigations of USB.

USB staff also handles customer complaints relating to safety issues per G.O. 95 and 128. Besides investigating incidents reported by the utility companies, USB may investigate customer complaints involving alleged violations of the General Orders, sometimes on behalf of Consumers Affairs Branch or through direct referral.

<b>For the 1997 Year</b>	<b>Total</b>
Number of Incidents Reported (both overhead and underground)	133
Number of Incidents Investigated	71
Number of Electric Complaints Received	116
Number of Weeks for On Call Engineer Duties	52
Number of USB Engineers* (not including management)	14

Table 7. Summary of Incident Investigations & Customer Complaints for USB in 1997  
 \* Average taken since the number of engineers varied throughout the 1997 year.

<b>For the 1997 Year</b>	<b>Total</b>
Average Number of Incidents Reported Per Month	11.08
Average Number of Incidents Investigated Per Month	5.92
Average Number of Electric Complaints Received Per Month	9.67
Average Number of Incidents Reported Per OCE Week	2.56
Average Number of Incidents Investigated Per Incidents Reported	0.53
Average Number of Incidents Investigated Per USB Engineer	5.07
Average Number of Electric Complaints Received Per USB Engr.	8.29
Average Number of OCE Weeks Per USB Engineer	3.71

Table 8. Tabulation of Averages for Investigations & Customer Complaints Conducted in 1997

# 1. Overhead Equipment

The following is a summary of leading causes of incidents in 1997 relating to overhead equipment.

For the 1997 Year	Fatalities	Injuries	Media Attn
Line contact, by aircraft	3	0	2
Line contact, by cranes, booms, lifts, etc.	0	5	4
Line contact, while handling tools, pipe, etc.	2	12	2
Line contact, by tree-trimmers or tree climbers	1	2	0
Line contact, by unauthorized pole climbers	1	1	0
Line contact, by utility employees	1	4	0
Line contact, by animals	0	0	3
Line contact, by tree/vegetation	0	0	15
Equipment failure (overhead)	1	1	9
Miscellaneous other causes	1	2	11
<b>Grand Total</b>	<b>10</b>	<b>27</b>	<b>46</b>

Table 9. Summary of Leading Causes of 1997 Incidents Relating to G.O. 95

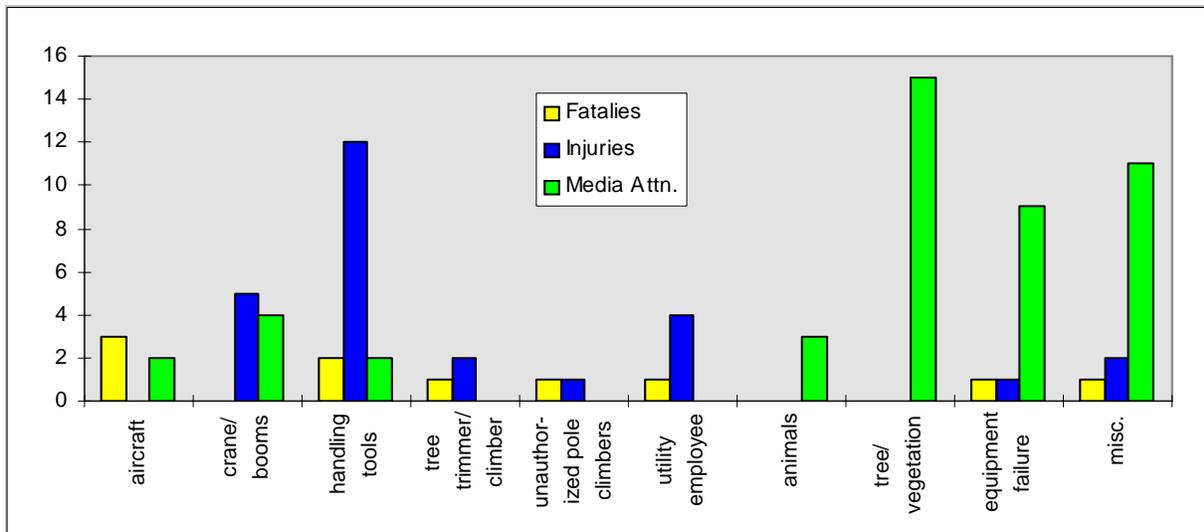


Figure 9A. Graph of Leading Causes of Incidents Involving Overhead Equipment in 1997

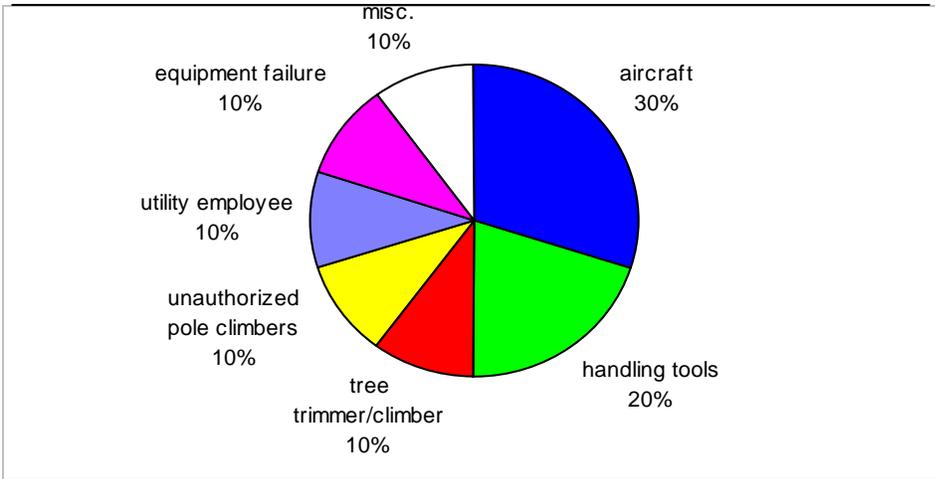


Figure 9B.  
Percentage of  
Overhead Incidents  
that Resulted In  
Fatalities.

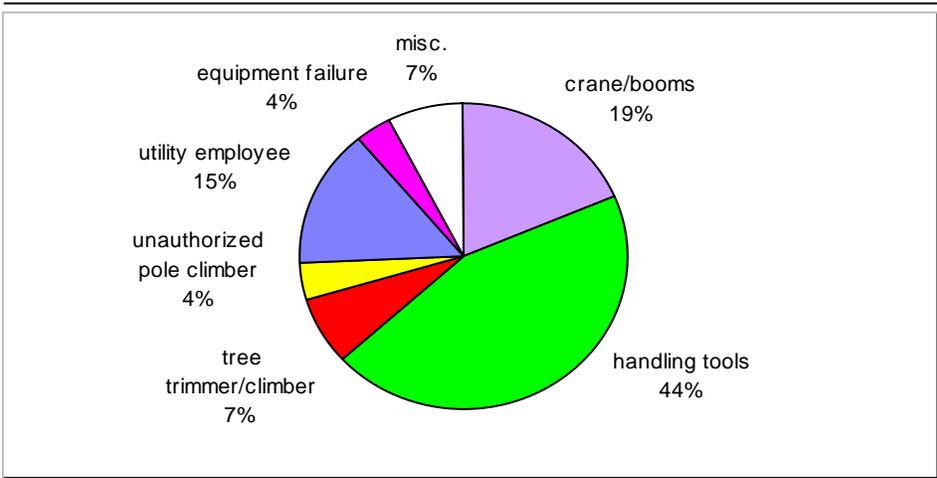


Figure 9C.  
Percentage of  
Overhead Incidents that  
Resulted In  
Injuries.

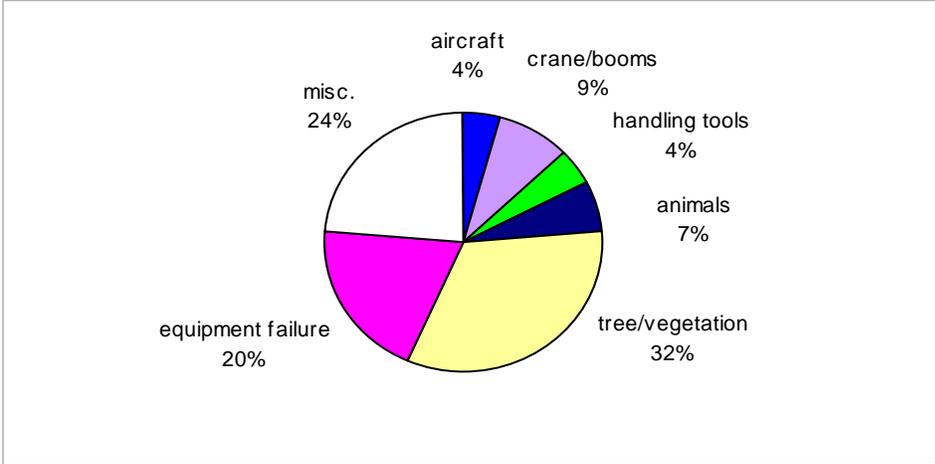


Figure 9D.  
Percentage of  
Overhead Incidents that  
Resulted In  
Media Attention.

**2. Underground Equipment**



The following is a summary of leading causes of incidents in 1997 relating to underground equipment.

For the 1997 Year	Fatalities	Injuries	Media Attn
Dig in	0	2	4
Equipment contact (subsurface)	0	8	1
Equipment contact (surface mounted)	1	2	0
Equipment failure (subsurface)	0	1	5
Equipment failure (surface mounted)	0	3	15
Explosion (subsurface)	0	0	0
Explosion (surface mounted)	0	0	0
Miscellaneous other causes	1	0	7
<b>Grand Total</b>	<b>2</b>	<b>16</b>	<b>32</b>

Table 10. Summary of Leading Causes of 1997 Incidents Relating to G.O. 128

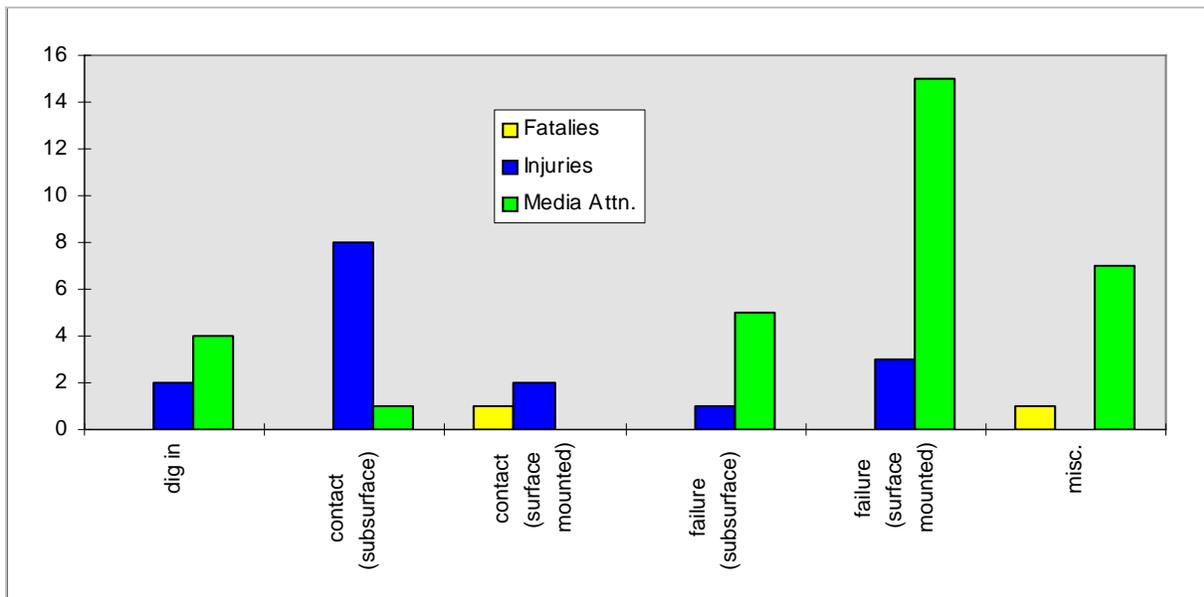


Figure 10A. Graph of Leading Causes of Incidents Involving Underground Equipment in 1997

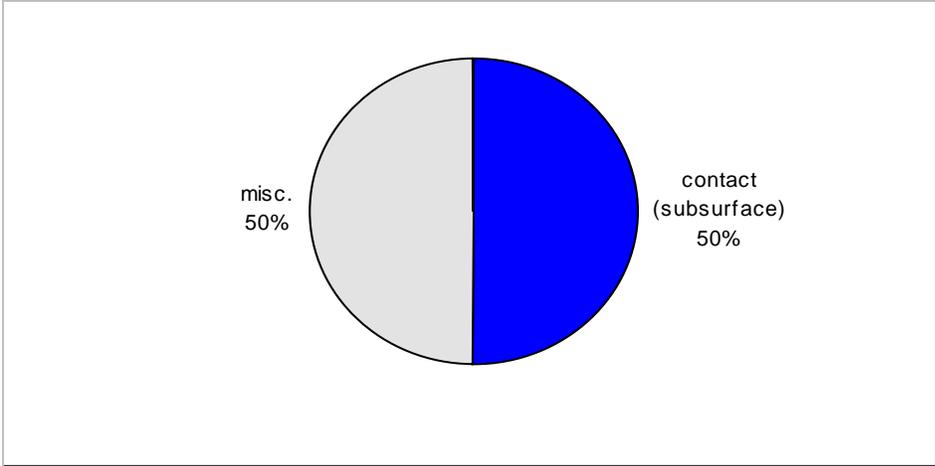


Figure 10B. Percentage of Underground Incidents that Resulted In Fatalities.

Figure 10C. Percentage of Underground Incidents that Resulted In Injuries.

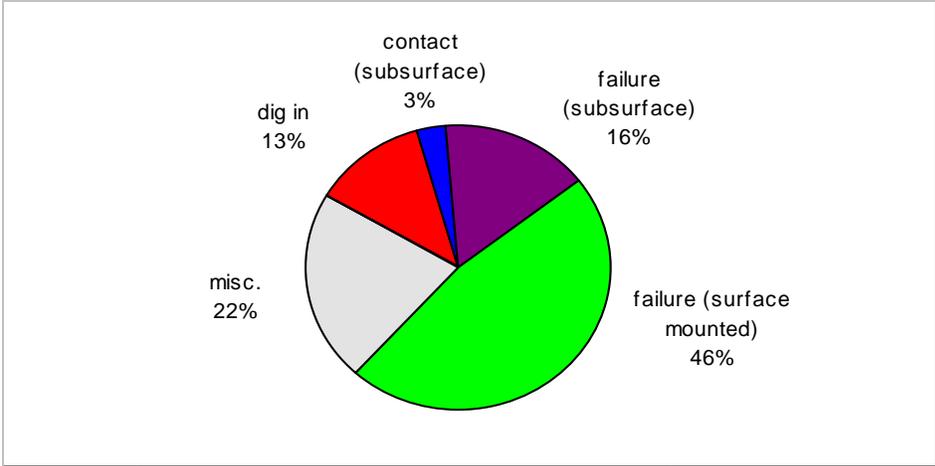
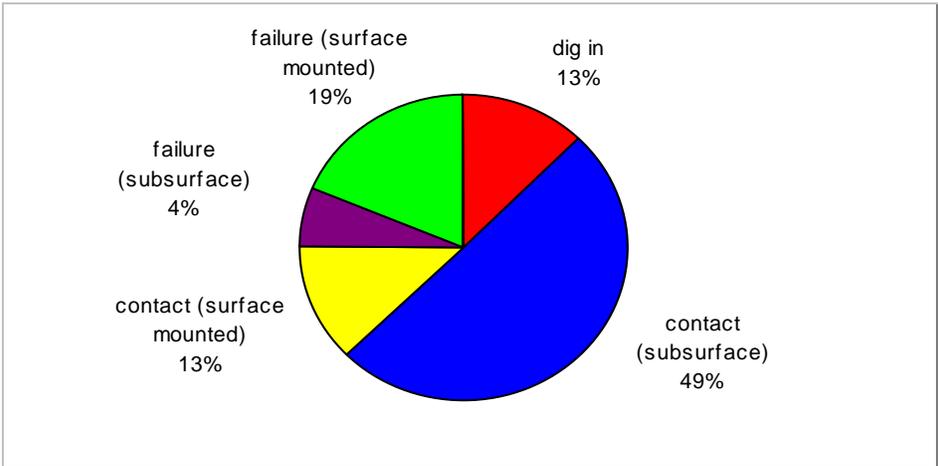


Figure 10D. Percentage of Underground Incidents that Resulted In Media Attention.

## **E. SPECIAL PROJECT - TREE TRIMMING**

On January 23, 1997, Commission Decision (D.) 97-01-044 adopted new utility tree trimming standards requiring minimum clearances to be maintained, at all times, between conductors and surrounding vegetation.

D.97-01-044 revised General Order (G.O.) 95, Rule 37 “Minimum Clearances of Wires Above Railroads, Thoroughfares, Buildings, etc.” to specify minimum clearances between conductors and vegetation. For conductors of 750 to 22,500 volts, commonly referred to as primary distribution conductors, the specified clearance from vegetation is 18 inches . The revised Rule 37 states that the clearances shall be maintained for normal annual weather variations. This is different from the conditions specified for other clearances in Table 1 which is 60 degrees, no wind. G.O. 95, Rule 35 “Tree Trimming” was also revised to require that the minimum clearances established in Rule 37 between line conductors and vegetation be maintained. Appendix E was revised to recommend that vegetation be trimmed back at least four feet to allow for regrowth between trimming cycles and maintain the 18-inch minimum clearance.

Three exceptions from the minimum clearance requirements between conductors and vegetation were added to Rule 35. Exception 1 addresses conductors or cables, energized at less than 60,000 volts, which are suitably protected from abrasion and from grounding of the circuit through the tree. Exception 2 states that the minimum clearance requirements do not apply where the utility has made a “good faith” effort to obtain permission to trim or remove vegetation but permission was refused or unobtainable. Exception 3 recognizes that unusual circumstances beyond the control of the utility may result in nonconformance with the rules.

D.97-01-044 established an implementation schedule for utilities to comply with the new tree trimming standards. Ordering Paragraph (OP) 3 states that each utility shall comply with the established standards by trimming to the extent of:

- 25% of the total number of trees requiring trimming by the six-month anniversary of the order.

- 50% of the total number of trees requiring trimming by the 12-month anniversary of the order.
- 75% of the total number of trees requiring trimming by the 18-month anniversary of the order.
- 100% of the total number of trees requiring trimming by the 2-year anniversary of the order.

OP 4 of D.97-01-044 states that, within 10 days after the effective date of the decision, each respondent utility shall file a plan specifying how the utility will comply with OP 3. The plan must include a current estimate of the total number of trees requiring trimming in order to comply with the standards adopted.

OP 5 of D.97-01-044 directs Commission staff to monitor utilities' compliance with the adopted standards and take all investigatory and enforcement action it deems appropriate.

On October 22, 1997, Commission D.97-10-056 modified the implementation schedule in D.97-01-044 and established a new schedule directing utilities to comply with the new standards by trimming to the extent of 33 1/3% of the total number of trees requiring trimming by the 12-month anniversary of the order; 66 2/3% by the 18-month anniversary; and 100% by the two-year anniversary. D.97-10-056 did not relieve utilities from their responsibility to comply with the 25% implementation requirement for the 6-month anniversary established in D.97-01-044.

D.97-01-044 directs Commission staff to monitor utilities' compliance with the adopted standards and take all investigatory and enforcement action it deems appropriate. Following the six-month anniversary of the order, the Utilities Safety Branch (USB) staff conducted random inspections in areas identified by the utility companies to be in compliance with the new standards. Because of the altered schedule adopted in D.97-10-056, the coming of the winter season, and the loss of some of our experienced staff, only a few of these random inspections were completed in 1997.

<b>For the 1997 Year</b>	<b>Total</b>
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Number of Inspections Conducted	12
Number of Inspection Days	24
Number of Personnel Days Used	54
Number of Violations Cited	312

Table 11. Summary of Tree Trimming Inspection in 1997

<b>For the 1997 Year</b>	<b>Total</b>
Average Number of Inspection Days Per Inspection	2
Average Number of Personnel Days Used Per Inspection	4.5
Average Number of Violations Cited Per Inspection Conducted	26
Average Number of Violations Cited Per Inspection Day	13

Table 12. Averages for Tree Trimming Inspection in 1997

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## ADDITIONAL INFORMATION

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### A. PUBLICATIONS

Copies of G.O. 95, 128, and 165 are available for the general public to purchase from the CPUC.

#### 1. How to Order

Call or write to : Documents, California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102  
(415) 703-1713

California Public Utilities Commission (most documents available)  
107 South Broadway, Room 5109  
Los Angeles, CA 90012  
(213) 897-2973

#### 2. G.O. 95, 128, and 165

##### G.O. 95

- Can be viewed on the internet at <http://www.cpuc.ca.gov/divisions/CSD/USB/usb.htm>
- “Rules for Overhead Line Construction” book is available for purchase at \$20.00 each.

##### G.O. 128

- “Rules for Construction of Underground Electric Supply and Communication Systems” book is available for purchase at \$5.00 each.
- Can be viewed on the internet at <http://www.cpuc.ca.gov/divisions/CSD/USB/usb.htm>

##### G.O. 165

- “Inspection Cycles for Electric Distribution Facilities”, the first copy of the G.O. leaflet is free with additional copies at \$0.50 each.