Proceeding No.: A.15-09-___
Exhibit No.: SDG&E-07
Witness: Walters

PREPARED DIRECT TESTIMONY OF

GREG WALTERS

ON BEHALF OF

SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

SEPTEMBER 25, 2015

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PREPARED DIRECT TESTIMONY OF GREG WALTERS

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Greg Walters. My business address is 8315 Century Park Court, San Diego CA, 92123.

Q. What is your current position?

A. I am currently employed by San Diego Gas & Electric Company ("SDG&E") as a Construction Standards Administrator in the Electric Transmission and Distribution Engineering Department.

Q. Please describe your professional experience.

A. I have held a variety of positions at SDG&E. I began my career as a laborer. In 1995, I became a Qualified Electrical Worker, working on the electric distribution system. From 2000 to 2004, I was Joint Facilities Administrator. In that position, I performed field checks of Communications Infrastructure Provider ("CIP") (*e.g.*, AT&T, Cox Communications, Time Warner) joint pole applications for accuracy and compliance with General Order ("GO") 95 and SDG&E construction standards. I also performed Quality Assurance audits and inspections of SDG&E Construction & Operations Centers, and I acted as the facilitator to the CPUC for its audits and inspections of SDG&E electric distribution system for compliance with GO 95 and GO 128.

Until assuming my current position earlier this year, I managed SDG&E's Compliance Management Group and Joint Facilities Department. In that role, I was heavily involved in SDG&E's compliance with GOs 95, 128, 165, and I continue to be involved in those efforts

today. I have been a liaison with the CPUC's Consumer Safety and Protection Division ("CPSD") (now the Safety and Enforcement Division ("SED")) with respect to those rules. I have performed internal Quality Assurance audits, coordinated SDG&E's response to CPUC GO 165 audits and inspections, and coordinated SDG&E's responses to the CPUC's electric incident data requests. In addition, I was previously responsible for maintaining SDG&E CIP joint pole contacts, policies and procedures.

I represent SDG&E on the State's GO 95/128 Rules Committee Executive Board. Throughout the past several years, I have been heavily involved in these rules, and have been involved in authoring and revising numerous GO 95 and GO 128 construction laws and codes. My qualifications are set forth in Appendix 1.

Q. Have you previously prepared testimony before the Commission?

A. Yes. I prepared direct testimony in the Commission's "Order Instituting Investigation, and Order to Show Cause" regarding the Guejito Fire (I.08-11-007) ("Guejito Fire OII").

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your direct testimony?

A. One of the 2007 wildfires, the Guejito Fire, was found by the California Department of Forestry and Fire Protection ("Cal Fire") to have started when a lashing wire securing a Cox Communications' ("Cox") fiber optic cable spanning below an SDG&E 12 kV distribution line came into contact with that distribution line.[1] The purpose of my testimony is to describe SDG&E's efforts prior to the 2007 wildfires to inspect and maintain its distribution system and to comply with the Commission's GO requirements relating to the safe operation of that system.

[1] The Investigation Report located the start of this fire to a Cox lashing wire and 12 kV conductor between SDG&E poles P196387 and P196394 in the San Pasqual Valley in San Diego County.

I also describe SDG&E's CIP policies and procedures at the time of the fire and the GO rules and regulations applicable to CIPs. In that regard, I discuss the regulatory proceedings in the aftermath of the 2007 wildfires, which I understand were intended by the Commission to incorporate lessons learned to reduce the risk of such wildfires from utility or CIP facilities in the future.

Q. How is the remainder of your testimony organized?

A. In Section III, I describe SDG&E's Corrective Maintenance Program activities, provide an overview of GOs 95, 128 and 165 and describe SDG&E's compliance with those rules and regulations. In Section IV, I discuss SDG&E's joint pole attachment process, including with respect to the facilities linked to the Guejito Fire, and the GO rules and regulations applicable to CIPs. Lastly, I explain that SDG&E had no basis to believe that its facilities would be involved in the Guejito Fire.

III. SDG&E'S CORRECTIVE MAINTENANCE PROGRAM AND COMPLIANCE WITH GENERAL ORDERS 95, 128 AND 165

Q. What is SDG&E's Corrective Maintenance Program?

A. The Corrective Maintenance Program is SDG&E's program for inspecting and maintaining overhead and underground distribution facilities for purposes of safety and to ensure operating function. Through this program, SDG&E inspects those facilities each year and performs follow-up work, such as repairs, to correct any problems that are found. The inspection and repair work is scheduled, recorded and tracked in an electronic database, and status reports are generated so that SDG&E may track the progress of the inspection and repair work.

Given the size of SDG&E's distribution system, implementing the Corrective Maintenance Program is a massive undertaking. In 2007, for instance, SDG&E completed over 64,000 detailed inspections of electric distribution facilities, and 21,000 intrusive wood pole

inspections. SDG&E also physically patrolled the areas depicted in over 6,300 maps. SDG&E witness Mr. Darren Weim provides further detail about the implementation of this program, including the details of the inspections and corrective work that is undertaken.

SDG&E also has procedures to in place – the Quality Assurance Program – to review the work performed under the Corrective Maintenance Program.

Q. Please describe the Quality Assurance Program.

A. Under the Quality Assurance Program, the Compliance Management department reviews the work that has been performed by its inspections and electric distribution construction crews to ensure that the work has been done correctly and is in compliance with applicable regulations, which I discuss below. Each quarter, the Quality Assurance team audits a particular district (SDG&E has divided its operations into six major and two satellite districts).

Q. What is involved in that audit process?

A. The Quality Assurance team reviews a random sampling of the district's Corrective Maintenance Program inspection records to make sure they are compliant with the program and applicable regulations, including that inspections are being accurately observed, and that any corrective actions were completed on a timely basis. Once the team has audited the records, a field audit is performed to verify inspectors are accurately finding non-compliance problems or issues during their inspection and repairing any infractions correctly.

Q. How does the Corrective Maintenance Program relate to the Commission's requirements for inspecting and maintaining utility facilities?

A. The Corrective Maintenance Program is specifically intended to ensure compliance with those requirements, which are set forth in General Orders 95, 128 and 165.

Q. What are GOs 95, 128 and 165?

A. These are Commission rules and regulations that are intended to promote public safety, through the safe operation of electric utility and communications infrastructure facilities. The rules are intended to ensure that utilities provide safe and reliable service to the public and a safe working environment for persons engaged in the construction, maintenance, operation or use of electric facilities. GO 95 establishes requirements for overhead electric design, construction, and maintenance. GO 128 establishes requirements for underground electrical supply and communication systems. GO 165 sets forth inspection requirements for electric distribution and transmission facilities (excluding those facilities contained in a substation), to ensure ongoing compliance with GO 95 and GO 128.

Q. In general, what are the requirements imposed by GO 165 on California utilities?

A. GO 165 requires every California utility to conduct "frequent and thorough" inspections to verify that its facilities comply with GO 95 and 128 on an ongoing basis. The rules specify the types of inspections required and how often facilities must be inspected (inspection cycles). It also requires that utilities resolve any issues identified in the inspections on a timely basis.

Table 1 of GO 165 provides the inspection intervals for electric distribution facilities. Those intervals vary depending on the location of the facilities and the intensity of the inspection. Utilities are required to conduct patrol inspections every year for facilities in urban areas, and every two years for facilities in rural areas, except that, as of 2009, patrol inspections must be conducted every year in rural areas in Extreme and Very High Fire-Threat Zones of certain counties in Southern California (including the counties in SDG&E's service territory).[2] Utilities are also required to conduct detailed inspections of facilities in urban and rural areas every five years.

[2] D.09-08-029.

Q. Has SDG&E submitted the details of its compliance with GO 165 to the Commission?

A. Yes. The Commission has required utilities to submit and maintain a compliance plan for inspections and record-keeping. SDG&E submitted its GO 165 Compliance Plan to the Commission on July 1, 1997. *See* Appendix 2. SDG&E subsequently incorporated its GO 165 Compliance Plan into the Corrective Maintenance Program Manual, which is the internal document that describes in detail the corrective maintenance activities and provides direction to individuals in the field that undertake this work, and which is attached to Mr. Weim's testimony.

Additionally GO 165 requires utilities to submit to the Commission an annual report detailing its compliance, which is to include detailed information about inspections, what those inspections find, and corrective actions taken. SDG&E submits such annual reports about its compliance, and its 2006 Annual Report (submitted on July 2, 2007) is attached hereto as Appendix 3.

Q. Do you believe that SDG&E has reasonable processes in place for compliance with GOs 95, 128 and 165?

A. Yes. Based on my experience with the program, I believe the Corrective Maintenance Program is designed and implemented appropriately. SDG&E takes General Order compliance very seriously and works diligently to remedy any infractions that develop. In order to ensure the safest possible system, SDG&E continuously tracks performance and looks at trends to try to predict maintenance issues that may arise. We also routinely update practices as rules or risks change, verify employees are properly trained, and create and distribute reports so that everyone is up to date on applicable regulations

Mr. Weim discusses the details of the implementation of the plan, in other words, how SDG&E personnel comply with the program (and the General Orders) in the field.

Q. Were the compliance programs and efforts that you have described in place at the time of the 2007 wildfires?

A. Yes, they were. While there have been some changes in certain details, all of the basic features I just described were in place in 2007, and even going back to 1998.

Q. Does the CPUC audit the utilities' General Order compliance practices and activities?

A. Yes, the SED conducts periodic GO 165 audits, and it (or its predecessor, the CPSD) has been doing so since 2004.

Q. What happens in those audits?

A. The purpose of the audits is to make sure that SDG&E is complying with the requirements of GOs 95, 128 and 165; that we are identifying issues as required by GO 165; and that we are taking corrective actions in accordance with GO 95 and 128. The SED looks at our Corrective Maintenance Program records to check for the historical compliance with the inspection cycles required by GO 165, and then perform a field inspection in order to compare what they see in the field with our records. They also look at a sampling of new construction. At the end of the process, we hold a meeting with them to discuss their findings. This process usually lasts about one week.

Q. How does SDG&E fare in these audits?

A. SDG&E has performed well over the years, including performance prior to the 2007 wildfires. While much of the post-audit feedback I have received from the Commission auditors in the 2002 through 2015 time period is verbal, I am comfortable in stating based on these discussions that those auditors believe SDG&E has a model program for utilities in California.

Q. Is it realistic to expect that utilities will be 100 percent compliant with the GO requirements at all times?

A. No, it is not. Considering the size, environment and the complexities of an electric distribution system, it would be impossible for any utility to achieve 100 percent compliance with GOs 95 and 128 at all times. For instance SDG&E distribution system includes 1,028 circuits, 223,076 poles, 10,361 miles of underground lines, and 6,563 miles of overhead lines. Much of this equipment has been in place for many years and requires regular maintenance. Every year we inspect more than 60,000 poles and correct nearly 30,000 infractions. The vast majority of these infractions do not pose any safety issues, and almost all result from factors outside SDG&E's control, like the weather or the public. Thus, it is not reasonable to expect that SDG&E's facilities will be in compliance 100 percent of the time or to assume that SDG&E is somehow at fault for any given infraction.

While some may argue that the fact we identify thousands of infractions every year suggests that SDG&E is not reasonable in our inspection and maintenance programs and procedures, I believe the opposite conclusion is appropriate.

Q. Does the Commission expect that utilities will be 100 percent compliant with the GO requirements?

A. Not to my understanding. The Commission understands the realities of operating an electric utility in California. For example, in a prior investigation regarding Southern California Edison's violations of the GO 95 and 128 requirements, the CPUC noted that:

> This decision does not fine Edison for 4,271 observed violations of the GOs that Edison remedied promptly once the Commission's Consumer Protection and Safety Division (CPSD) brought the violations to Edison's attention. Both Edison and CPSD agree that it is impossible for a utility to keep its distribution system in perfect compliance with the safety GOs, and that at any given time, there will be multiple violations on a utility's system.[3]

[3] D.04-04-065 at 2

Later in this decision, the CPUC observed that "As discussed above, a failure to comply with a GO is a violation. At the same time, we recognize that 100% compliance with these GOs at all times is not realistic."[4]

IV. COMMUNICATIONS INFRASTRUCTURE PROVIDERS AND JOINT POLE ATTACHMENTS

A. Background

Q. With respect to the Guejito Fire, you previously mentioned that Cox facilities in the area of the ignition contributed to the start of the fire. Why does SDG&E permit Cox and other CIPs to attach their equipment and facilities to SDG&E poles?

A. Consistent with federal law and in order to promote communications infrastructure, the Commission has permitted CIPs to attach their facilities to utilities' poles for many years.[5] In other words, SDG&E is required to allow a CIP to attach to its poles if they do so consistent with GO 95.

Q. When did Cox apply to attach its facilities to SDG&E poles 196394 and 196387 at the site of the Guejito Fire ignition?

A. In August 2001.

Q. Did Cox have contractual obligations with respect to the facilities it attaches to SDG&E's poles, including the facilities located on and between poles 196394 and 196387?

A. Yes. A license agreement established Cox's contractual obligations with respect to the facilities it attaches to SDG&E's poles, which required Cox to install, operate and maintain its equipment in compliance with GO 95.

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4 *Id*. at 31.

5 *See* D.98-10-058.

Q. At the time of the 2007 wildfires, did SDG&E have any internal processes in place with respect to joint pole attachments?

A. Yes. As noted, SDG&E and the CIPs entered into a pole attachment license agreement, allowing the CIP access to SDG&E's electric distribution facilities, and setting forth the CIP's obligations. The CIP would submit a joint pole attachment application to SDG&E, listing the poles to which the CIP intended to attach its facilities and referencing any necessary make-ready work or proposed modifications to the existing facilities. SDG&E would then review the application and approve or deny it based on the accuracy of the application and the make-ready work or proposed modifications that SDG&E might be required to perform in anticipation of any such CIP attachment or modification.

B. General Order Requirements for CIPS

Q. At the time of the large 2007 wildfires, were there any safety requirements related to CIP joint pole attachments?

A. Yes. The GO 95 and 128 safety requirements have always applied to both power and telecommunication utilities.

Q. Please describe those requirements as they apply to the CIPs.

A. First, under GO 95, Rule 31.1 (Design, Construction and Maintenance), electrical supply and communications systems must be designed to enable them to furnish safe, proper and adequate service, and design, construction, and maintenance is to be performed in accordance with accepted good practice for the given local conditions known at the time.

Second, under GO 95, Rule 31.2 (Inspection of Lines), overhead lines, including communications systems, must be inspected frequently and thoroughly for the purpose of ensuring that they are in good condition so as to conform to the Commission's rules.

Third, GO 95 Rule 32.1 (Two or More Systems) details the order as to how the clearances in GO 95, Rule 38 (discussed below) are to be accomplished and maintained when two or more systems are involved. That rule requires, in part:

> Where two or more systems are concerned in any clearance, that owner or operator who last in point of time constructs or erects facilities, shall establish the clearance required in these rules from other facilities which have been erected previously.

Fourth, GO 95, Rule 38 (Clearances Wire to Wire) requires a 6-foot vertical clearance between the SDG&E conductors and CIP facilities.

Q. Prior to the 2007 wildfires, had SDG&E encountered GO infractions caused by or related to CIPs and other third parties?

A. Yes, on many occasions. In fact, although not required by GO 95 and 165, SDG&E began tracking such infractions and notified the Commission in several annual GO 165 compliance reports of this issue. For instance, in the 2006 Annual Report – attached hereto as Appendix 3 – SDG&E noted as follows:

> Infractions caused by "Third Parties" are an ongoing issue that SDG&E has dealt with since the implementation of GO 165. On a daily basis, overhead and underground Inspectors encounter GO 95 and 128 infractions caused by telecommunications companies and/or private property owners who do not understand the implications of not complying with these codes.

Q. Did SDG&E take any action when it found such infractions?

A. Yes. SDG&E routinely provided a detailed notice to CIPs of their infractions, even though not required to do so by GO 165 prior to the 2007 wildfires. The notices detailed the affected pole numbers and addresses or location identifiers and the problem requiring remediation. These notices typically also included photographs of the problem. The preparation of these notices was quite labor intensive. SDG&E's 2006 Annual Report also describes these measures:

> Once SDG&E is aware of such violations, action is taken as soon as reasonably possible, even though SDG&E did not cause the problem. SDG&E has developed an "Investigation Order System" that gives notification to the violating third party or parties and attempts to bring about resolution of these types of infractions.

After describing the steps involved in the "Investigation Order System," the 2006 Annual Report noted that SDG&E processed 3,176 third-party investigation orders in 2005, only 925 of which were resolved by the third parties.

SDG&E further noted in the 2006 Annual Report that, in 2004, it had "initiated programs with telecommunications companies in its service territory to develop a more common and comprehensive understanding of what is required by General Orders 95 and 128 when constructing and maintaining infrastructure. These programs have proven to be very beneficial for all parties, considering the fact that a large number of electric and communication equipment occupy jointly used overhead poles and underground trenches."

Q. When SDG&E found that a CIP infractions that posed a safety hazard, what action did SDG&E take?

A. If, in SDG&E's judgment, an infraction presented serious concerns that might jeopardize the safety and integrity of SDG&E's electric system, SDG&E would tag that infraction as a "trouble job" for immediate CIP remedial work. SDG&E then followed through with the CIP to ensure the necessary remedial work was promptly completed. SDG&E would not itself remedy CIP infractions since SDG&E did not own the facilities.

Q. Please describe CIPs compliance efforts and the Commission's GO 95 oversight, enforcement, and audit activities over CIPs prior to October 2007.

A. Based on my experience in dealing with CIPs and the Commission prior to October 2007, I believe CIPs GO 95 compliance efforts were lax despite SDG&E's repeated efforts to inform the CIPs of non-compliance. Before the 2007 wildfires, the CIPs were not required to comply

with GO 165, which meant that there was no real basis for compliance enforcement. I also understand that CPSD generally did not audit CIP compliance efforts and, as far as I know, the Commission had never undertaken enforcement efforts over CIP non-compliance concerns.

Q. Since the 2007 wildfires, has the Commission revised the regulations applicable to CIPs?

A. Yes. Those regulations have been strengthened considerably. Following the 2007 wildfires, the Commission issued its "Order Instituting Rulemaking to Revise and Clarify Commission Regulations Relating to Safety of Electric Utility and Communications Infrastructure Provider Facilities" (R.08-11-005) ("Fire Safety OIR").

In the Fire Safety OIR, the Commission explained that GOs 95, 128 and 165 are intended to promote the safe operation of electric utility and communications infrastructure facilities, but that "as the devastating fires in Southern California during the last two years have shown, there may be potential problems associated with the electric utilities and communications infrastructure providers' facilities, which may necessitate additional Commission safeguards."[6] In other words, I believe that the Commission understandably became more concerned based on lessons learned from the 2007 wildfires about the risk of fire caused by utility or CIP facilities. It recognized that the existing GO requirements might no longer be sufficient given the increasing risks of catastrophic wildfires in California, and that additional safeguards were needed.

Q. What additional safeguards did the Commission adopt?

A. The Commission phased the Fire Safety OIR and has, to date, issued three major decisions – D.09-08-029, D.12-01-032, and D.14-02-015. These three decisions have adopted a host of additional safeguards on a wide range of issues. In these decisions, the Commission

[6] OIR at 1.

clarified the applicability of certain portions of GO 95 to CIPs; required CIPs to take immediate corrective and preventative actions with respect to safety; required CIPs to inspect their overhead facilities on specified cycles and to maintain auditable records.

Q. Were you involved in those proceedings?

A. Yes. I worked with several other SDG&E personnel on various issues and developed proposals, rule changes and rule adjustments relating to the Fire Safety OIR.

Q. Since the 2007 wildfires, has SDG&E changed its process for joint pole attachments?

A. Yes. SDG&E's joint attachment process has become more stringent. Every joint pole attachment application receives a thorough pre-construction assessment review before access is permitted, and each application must be accompanied with pole loading calculations. Further, during mid-2015 SDG&E has implemented a post-construction assessment review of CIPs construction activities to ensure such activities match their designs. This post-construction process is not required by GO 95 or GO 165. These changes are intended to promote safety.

C. The Guejito Fire

Q. Did the CPSD (now the SED) specifically investigate the Guejito Fire?

A. Yes, it did. In the Guejito Fire OII.

Q. What conclusions did the CPSD reach?

A. The CPSD found that the Cox lashing wire[7] at the fire origin site was broken and came into contact with the SDG&E conductor. The CPSD's opinion was that Cox failed to maintain and inspect the lashing wire and was thus in violation of GO 95, Rules 31.1 and 31.2 at the time of the incident. The CPSD also faulted SDG&E for its conduct during the investigation. It was determined based on a post-fire survey that there was a vertical mid-span clearance measurement

[7] A lashing wire is a wire used in the communications industry to bind together aerial cables and support strand wires.

showing a 3.3 feet clearance between the Cox and SDG&E facilities, and CPSD argued that both Cox and SDG&E were in violation of GO 95.

Q. How was this investigation resolved?

A. Ultimately, the Commission approved a settlement agreement between SDG&E and the CPSD (as well as a separate agreement between Cox and the CPSD) resolving its investigation into the Guejito Fire.

Q. Prior to the Guejito Fire, did SDG&E have any reason to believe that the facilities in the span between Poles P196387 and P196394 may have posed a safety hazard or been in violation of a GO requirement?

A. No, it did not. In accordance with its Corrective Maintenance Program, SDG&E had undertaken numerous patrols and detailed inspections of that span, as discussed by Mr. Weim. In addition, in its joint pole application, Cox represented to SDG&E that it would attach its facilities 6 feet below SDG&E's 12 kV conductors, as it was required to do by GO 95, Rule 32.1 and Rule 38 Table Wire to Wire Clearances. According to the CPSD report, Cox had not inspected the lashing wire at issue between the date of the initial installation in 2001 and October 22, 2007.

V. CONCLUSION

Q. Does this conclude your direct testimony?

A. Yes, it does.

APPENDIX 1

STATEMENT OF QUALIFICATIONS OF GREG WALTERS

My name is Greg Walters. I am currently employed by San Diego Gas & Electric Company ("SDG&E") as Construction Standards Administrator in the Electric Transmission and Distribution Engineering Department.

I have held a variety of positions at SDG&E. I began my career as a laborer. In 1995, I became a Qualified Electrical Worker, working on the electric distribution system. From 2000 to 2004, I was Joint Facilities Administrator. In that position, I performed field checks of Communications Infrastructure Provider ("CIP") (*e.g.*, AT&T, Cox Communications, Time Warner) joint pole applications for accuracy and compliance with General Order ("GO") 95 and SDG&E construction standards. I also performed Quality Assurance audits and inspections of SDG&E Construction & Operations Centers, and I acted as the facilitator to the CPUC for its audits and inspections of SDG&E electric distribution system for compliance with GO 95 and GO 128.

Until assuming my current position, I managed SDG&E's Compliance Management Group and Joint Facilities Department. In that role, I was heavily involved in SDG&E's compliance with GOs 95, 128, 165, and I continue to be involved in those efforts today. I have been a liaison with the CPUC's Consumer Safety and Protection Division ("CPSD") (now the Safety and Enforcement Division ("SED")) with respect to those rules. I have performed internal Quality Assurance audits, coordinated SDG&E's response to CPUC GO 165 audits and inspections, and coordinated SDG&E's responses to the CPUC's electric incident data requests. In addition, I was previously responsible for maintaining SDG&E CIP joint pole contacts, policies and procedures.

I represented SDG&E on the State's GO 95/128 Rules Committee Executive Board. Throughout the past several years, I have been heavily involved in these rules, and have been involved in authoring and revising numerous GO 95 and GO 128 construction laws and codes. I have previously testified before the California Public Utilities Commission.

APPENDIX 2

SDGE San Diego Gas & Electric
P.O BOX 1831 • SAN DIEGO, CA 92112-4150 • 619 / 699-5039

KEITH W. MELVILLE
LAW DEPARTMENT
ATTORNEY

FILE NO. PUG100
R.96-11-004/I.95-02-015

July 1, 1997

Docket Office
California Public Utilities Commission
505 Van Ness Avenue, Room 2001
San Francisco, California 94102

RE: GENERAL ORDER 165 COMPLIANCE PLAN FOR SAN DIEGO GAS & ELECTRIC

Pursuant to Ordering Paragraph 3 of Decision 97-03-070 enclosed General Order 165 Compliance Plan for SDG&E for filing are the original and four (4) copies of the above-mentioned document. The original and (5) copies of this document were filed at the California Public Utilities Commission's office in San Diego, 1350 Front Street.

All interested parties of record **R.96-11-004/I.95-02-015** are being mailed copies today as evidenced by the attached Certificate of Service. Thank you for your attention to this matter.

Sincerely,

Keith W. Melville

KWM:krk
Enclosures
cc: All parties of record in **R.96-11-004/I.95-02-015**
ALJ Kim Malcolm (via Overnight Courier)

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking for electric distribution facility standard setting	)	R.96-11-004
Order Instituting Investigation Into the rates, charges, and practices of Pacific Gas & Electric Company	)	I.95-02-015

GENERAL ORDER 165 COMPLIANCE PLAN FOR SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E)

KEITH W. MELVILLE

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July 1, 1997

PROGRAM DESCRIPTION

June 30, 1997

Prepared By: Frank Marsman
Pete Girard

ELECTRICAL SYSTEM INSPECTIONS

PATROLS

Overhead

- Patrols of SDG&E's overhead electrical system will be performed, utilizing a "drive by" process, as follows:
    - Patrols of facilities in urban areas will be completed annually.
    - Patrols of facilities in rural areas will be completed every two years.
- The patrol will look, from a "drive by" process, for the most obvious structural problems and hazards. The check list will contain the following conditions:
    - Obvious broken hardware, which includes broken crossarm braces that allow crossarms to twist and broken primary insulators that allow conductors to float freely.
    - Poles leaning badly
    - Broken Crossarms.
    - Foreign objects in the primary conductors.
    - Conductors broken and laying on the ground or conductors not tied to insulators and sagging very close to the ground.
    - Street lights broken (Company owned).
- Record keeping will be simple:
    - Patrol completion may be by business letter that the patrols were completed or by notation circuit by circuit or facility map page by facility map page, identifying that all facilities were patrolled.
    - Record of problems found will be by exception. Records of last patrol inspection date will not be maintained by pole position unless a problem is identified. Records of problems found and the corrective actions pending or completed will be maintained centrally.
- Training will be provided to the patrol inspector for identification of the items noted in the check list, as well as the proper procedures to follow when a problem is found.
- Present SDG&E inspection procedures will be continued through the end of 1997, or while needed modifications are made to accommodate this process.

Underground

- Patrols of SDG&E's underground electrical system will be performed, utilizing a "drive by" process, as follows:
    - Patrols of facilities in urban areas will be completed annually.
    - Patrols of facilities in rural areas will be completed every two years.
- The patrol will look, from a "drive by" process, for the most obvious structural problems and hazards. The check list will contain the following conditions:
    - Pad mounted equipment "off" its pad.
    - Pad mounted equipment cabinets badly damaged.

    - Subsurface equipment covers or doors badly damaged.
    - Street lights broken (Company owned).
- Record keeping will be simple:
    - Patrol completion may be by business letter that the patrols were completed, by notation circuit by circuit or by facility page, identifying that all facilities were patrolled.
    - Record of problems found will be by exception. Records of last patrol inspection dates will not be maintained by facility position location unless a problem is identified. Records of problems found and the corrective actions pending or completed will be maintained centrally.
- Training will be provided to the patrol inspector for identification of the items noted in the check list, as well as the proper procedures to follow when a problem is found.
- Present SDG&E inspection procedure will be continued through the end of 1997, or while needed modifications are made to accommodate this process.

DETAILED

Overhead - OH5

- Detailed inspections of all poles in the overhead system will be performed on a 5 year cycle. Approximately 20% of SDG&E's total pole population will be inspected annually. Variations in inspected percentages may occur yearly, but 100% will be completed every 5 years. (New construction during an inspection cycle will be considered inspected).
- The detailed overhead inspection requires that each pole position be visited and that the pole and the equipment supported by the pole be carefully examined visually for conformance to CPUC General Order 95 requirements. By systematically inspecting all poles and the equipment they support, required equipment inspections will be completed within the time frames prescribed by General Order 165.
- The inspections will be performed by persons qualified to perform the function.
- Record keeping will be maintained in an electronic data base and will contain the following information, on a location specific basis, as a minimum:
    - Date of last inspection
    - Inspector Identification
    - Equipment condition code. Equipment condition codes will indicate that the equipment does not need any maintenance work or will indicate the maintenance work needed to return the equipment to a state of not requiring any maintenance work.
    - Documentation of pending and completed corrective action work will be maintained.
- The present SDG&E inspection procedure will be continued through the end of 1997 while needed modifications are made to accommodate this process. A new 5 year cycle inspection format will start January 1, 1998.

Underground (Pad mounted)

The underground pad mounted inspection will consist of two separate inspection types:

Dead Front Equipment - AGEXT5

- Detailed inspections of all dead front, pad mounted equipment, in the underground system will be performed on a 5 year cycle. Approximately 20% of SDG&E's total pad mounted dead front equipment will be inspected annually. Small variations in inspected percentages may occur yearly, but 100% will be completed every 5 years. (New construction during an inspection cycle will be considered inspected).
- A detailed inspection of dead front, pad mounted, equipment requires that each dead front, pad mounted, piece of equipment be visited and the equipment be carefully examined externally by visual methods for conformance to CPUC General Order 128 requirements.
- The inspections will be performed by persons qualified to perform the function.
- Record keeping will be maintained in a computer data base and will contain the following information, on a location specific basis, as a minimum:
    - Date of last inspection
    - Inspector Identification
    - Equipment condition code. Equipment condition codes will indicate that the equipment does not need any maintenance work or will indicate the maintenance work needed to return the equipment to a state of not requiring any maintenance work.
    - Documentation of pending and completed corrective action work will be maintained.
- The present SDG&E inspection procedure will be continued through the end of 1997 while needed modifications are made to accommodate this process. A new 5 year cycle inspection format will start January 1, 1998.

Live Front Equipment - AGINT5

- Detailed inspections of all live front, pad mounted equipment, in the underground system will be performed on a 5 year cycle (This includes non-oil filled and non-gas filled switches). Approximately 20% of SDG&E's total pad mounted live front equipment will be inspected annually. Variations in inspected percentages may occur yearly, but 100% will be completed every 5 years. (New construction during an inspection cycle will be considered inspected).
- A detailed inspection of live front, pad mounted, equipment requires that each live front, pad mounted, piece of equipment be visited and the equipment be opened and carefully examined externally and internally, by visual methods, for conformance to CPUC General Order 128 requirements.
- The inspections will be performed by persons qualified to perform the function.
- Record keeping will be maintained in a computer data base and will contain the following information, on a location specific basis, as a minimum:

- Date of last inspection
- Inspector Identification
- Equipment condition code. Equipment condition codes will indicate that the equipment does not need any maintenance work or will indicate the maintenance work needed to return the equipment to a state of not requiring any maintenance work.
- Documentation of pending and completed corrective action work will be maintained.

- The present SDG&E inspection procedure will be continued through the end of 1997 while needed modifications are made to accommodate this process. A new 5 year cycle inspection format will start January 1, 1998.

Underground (Sub-surface) - SS3

- Detailed inspections of all underground subsurface transformers, non-oil and non-gas filled switches/protective devices, and regulators/capacitors, addressed in GO 165, in the underground system will be performed on a 3 year cycle. Approximately 33% of SDG&E's total population of these pieces of equipment will be inspected annually. Variations in inspected percentages may occur yearly, but 100% will be completed every 3 years. (New construction during an inspection cycle will be considered inspected).
- A detailed inspection of underground subsurface equipment requires that each subsurface enclosure be visited and opened so that the equipment within can be carefully examined visually for conformance to CPUC General Order 128 requirements.
- The inspections will be performed by persons qualified to perform the function.
- Record keeping will be maintained in a computer data base and will contain the following information, on a location specific basis, as a minimum:
  - Date of last inspection
  - Inspector Identification
  - Equipment condition code. Equipment condition codes will indicate that the equipment does not need any maintenance work or will indicate the maintenance work needed to return the equipment to a state of not requiring any maintenance work.
  - Documentation of pending and completed corrective action work will be maintained.
- The present SDG&E inspection procedure will be continued through the end of 1997 while needed modifications are made to accommodate this process. A new 3 year cycle inspection format will start January 1, 1998.

Underground Oil and Gas Filled Switches (Pad mounted and Sub-surface) - SW3

- Detailed inspections of all underground switches, both pad mounted and subsurface, in the underground system will be performed on a 3 year cycle. Approximately 33% of SDG&E's the total population of these pieces of equipment

will be inspected annually. Variations in inspected percentages may occur yearly, but 100% will be completed every 3 years. (New construction during an inspection cycle will be considered inspected).

- A detailed inspection of underground switches requires that each equipment location, pad mount or subsurface enclosure be visited and opened so that the equipment within can be carefully examined visually for conformance to CPUC General Order 128 requirements. In addition, oil filed switches will have the oil sampled and processed by the lab for conformance with SDG&E standards.
- The inspections will be performed by persons qualified to perform the function.
- Record keeping will be maintained in a computer data base and will contain the following information, on a location specific basis, as a minimum:
    - Date of last inspection
    - Inspector Identification
    - Equipment condition code. Equipment condition codes will indicate that the equipment does not need any maintenance work or will indicate the maintenance work needed to return the equipment to a state of not requiring any maintenance work.
    - Documentation of pending and completed corrective action work will be maintained.

- The present SDG&E inspection procedure will be continued through the end of 1997 while needed modifications are made to accommodate this process. A new 3 year cycle inspection format will start January 1, 1998.

INTRUSIVE

Wood Pole

- Intrusive inspections of all poles in the overhead system will be performed in conformance with CPUC General Order 165 requirements. Approximately 10% of SDG&E's poles over 15 years of age, that have not had a previous intrusive inspection, will be inspected annually. SDG&E poles that are older than 15 years and have had a previous intrusive inspection will be inspected on a 20 year cycle with approximately 5% of these poles being inspected annually. Variations in inspected percentages may occur yearly, but 100% will be completed in conformance with CPUC General Order 165 requirements. (New construction during an inspection cycle will be considered inspected).
- The intrusive pole testing program at SDG&E is a centralized program that systematically addresses all SDG&E poles on a system wide basis and not on a district by district process. Program direction and records are handled on a centralized basis.
- Intrusive testing of wood poles is normally accomplished by excavating about the pole base and/or a sound and bore of the pole about the groundline area for conformance to CPUC General Order 95 requirements.
- The inspections will be performed by persons qualified to perform the function.
- Record keeping will be maintained in a computer data base and will contain the following information, on a location specific basis, as a minimum:

- Date of last inspection
- Inspector Identification
- Equipment condition code. Equipment condition codes will indicate that the equipment does not need any maintenance work or will indicate the maintenance work needed to return the equipment to a state of not requiring any maintenance work.
- Documentation of pending and completed corrective action work will be maintained.

- The present SDG&E inspection procedure will be continued through the end of 1997 while needed modifications are made to accommodate this process. A new 10/20 year cycle will start January 1, 1998.

A matrix showing SDG&E's maintenance inspection cycles is attached for easy review.

ATTACHMENTS

Attachments

The following documents are as of July 1, 1997. These documents are subject to change within the parameters of GO 165.

- SDG&E Inspection Cycle Matrix
- Cycle Timeline
- Detail Inspection System Document Examples (Formats of Source Records and Inspection Documents)
- Condition (Inspection) codes
- Patrol Inspection Forms (Overhead & Underground)

SDG&E INSPECTION CYCLE MATRIX

The SDGE cycle which corresponds to each of the GO165 requirements is placed into the table as follows:

General Order 165

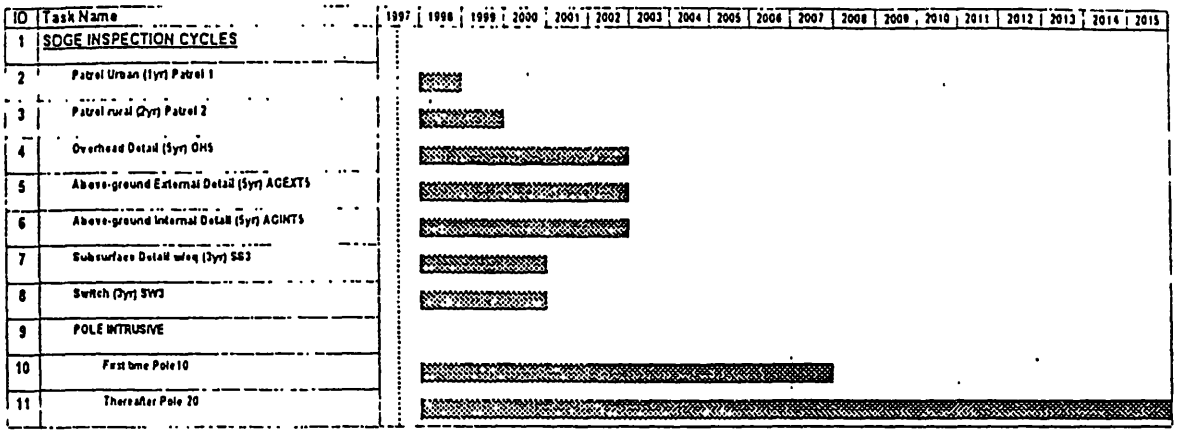
Electric Company System Inspection Cycles
(Maximum intervals in Years)

	PATROL		DETAILED		INTRUSIVE	
	Urban	Rural	Urban	Rural	Urban	Rural
Transformers						
Overhead	Patrol1	Patrol2	OH5	OH5		
Underground	Patrol1	Patrol2	SS3	SS3		
Pad Mounted (live front)	Patrol1	Patrol2	AGINT5	AGINT5		
Pad Mounted (dead front)	Patrol1	Patrol2	AGEXT5	AGEXT5		
Switching/Protective Devices						
Overhead	Patrol1	Patrol2	OH5	OH5		
Underground	Patrol1	Patrol2	SS3	SS3		
Pad Mounted (live front)	Patrol1	Patrol2	AGINT5	AGINT5		
Pad Mounted (dead front)	Patrol1	Patrol2	AGINT5	AGINT5		
Oil & Gas switches (above or below surface)	Patrol1	Patrol2	SW3	SW3		
Regulators/Capacitors						
Overhead	Patrol1	Patrol2	OH5	OH5		
Underground	Patrol1	Patrol2	SS3	SS3		
Pad Mounted (live front)	Patrol1	Patrol2	AGINT5	AGINT5		
Pad Mounted (dead front)	Patrol1	Patrol2	AGEXT5	AGEXT5		
Overhead Conductors and Cables	Patrol1	Patrol2	OH5	OH5		
Streetlighting	Patrol1	Patrol2	x	x		
Wood Poles under 15 years	Patrol1	Patrol2	x	x	x	x
Wood Poles over 15 years which have not been subject to intrusive inspection	Patrol1	Patrol2	x	x	POLE15	POLE15
Wood Poles which passed intrusive inspection					POLE20	POLE20

Where the cycles are:

Patrol1	One-year patrol cycle
Patrol2	Two year patrol cycle
OH5	Overhead five-year detail inspection
AGEXT5	Above ground external five year detail inspection
AGINT5	Above ground internal five year detail inspection
SS3	Subsurface internal three year detail inspection
SW3	Switch internal three year inspection
POLE15	Wood pole intrusive fifteen year inspection
POLE20	Wood pole intrusive twenty year inspection

CYCLE TIMELINE



DETAIL INSPECTION SYSTEM DOCUMENT EXAMPLES

SDG&E utilizes an automated inspection record system, Distribution Inspection Management System (DIMS). DIMS consists of two main components, DIMS Mobile Data Terminal (DIMS/MDT) and DIMS Online (DIMS/ONL).
DIMS/MDT is the field data collection component, which consists of handheld pen-based microcomputers loaded with the DIMS application. This application provides the inspector with a graphical user interface (GUI) with the following attributes:

- Graphical facility mapping and location
- Facility-specific inspection criteria
- Equipment-specific condition codes
- The ability to select one or more inspection cycle types
- Automated uploading of inspection data

DIMS/ONL is the office workstation component, which operates on a standard desk computer connected to the corporate local-area network. Uploaded data from DIMS/MDT is post-processed into inspection records which become part of the mainframe Graphical Facilities Mapping System (GFMS), and are later accessed by many subsystems, including DIMS/ONL. DIMS/ONL allows the following:

- The ability to clear conditions found after repairs have been made
- Generate reports on work backlog
- Generate reports showing inspection progress by facility map
- Display inspection history of individual structures
- Maintain system tables

Because DIMS is an automated system, there are many individual input screens and report layouts. Representative samples are shown following:

DETAIL INSPECTION SYSTEM DOCUMENT EXAMPLES

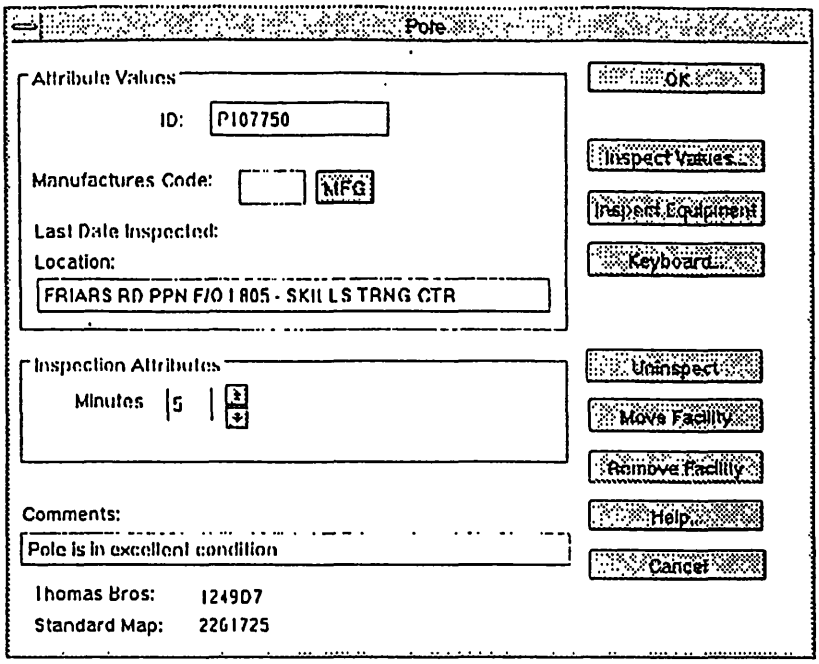


Figure 1.

This is a sample of the entry point into an overhead structure, giving access to the associated equipment. After having selected a particular pole from a graphical map display, the inspector enters basic information on the pole on this screen. By using the 'Inspect Values' option list, the inspector records various conditions found for the pole.

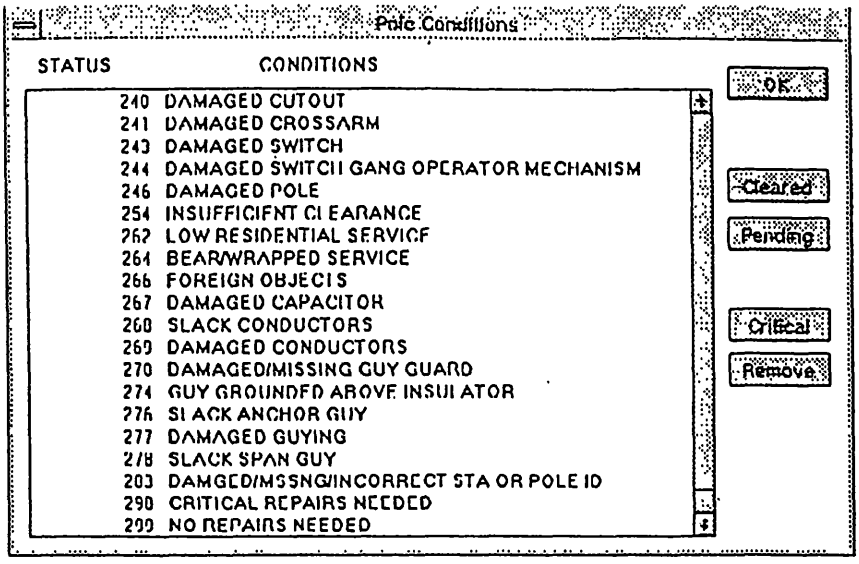


Figure 2.
This is a sample of the 'Inspect Values' conditions specific to poles. The inspector selects those conditions found on the pole being inspected. These are then transferred to the host computer system.

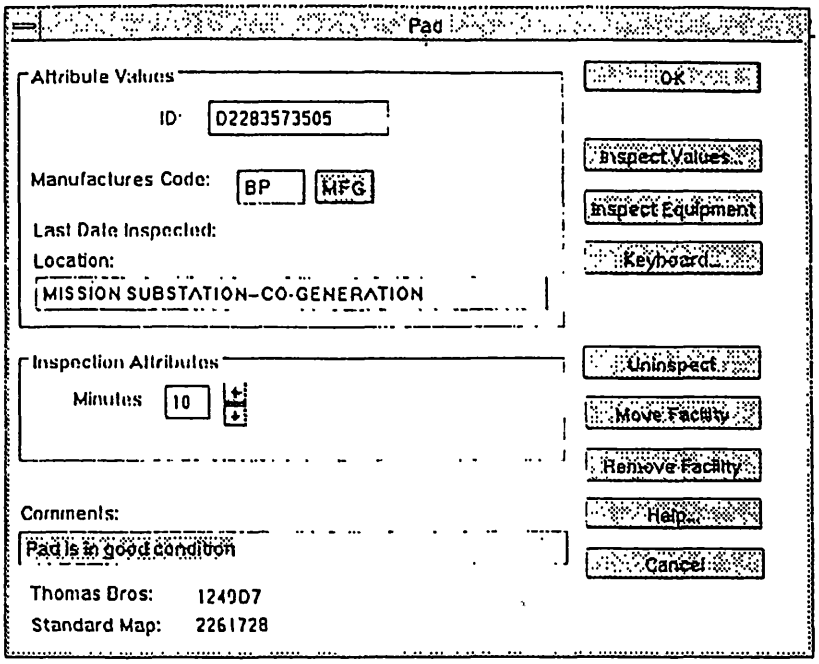


Figure 3.
This is a sample of the entry point into an underground structure, giving access to the associated equipment. After having selected a particular structure from a graphical map display, the inspector enters basic information on the parent structure, in this case a pad, using the 'Inspect Values' option list. This is a listing of various conditions which can be reported for the pad itself.

The next selection, 'Inspect Equipment', progresses through the various pieces of equipment found on that particular pad. A sample of condition code listings available for transformers

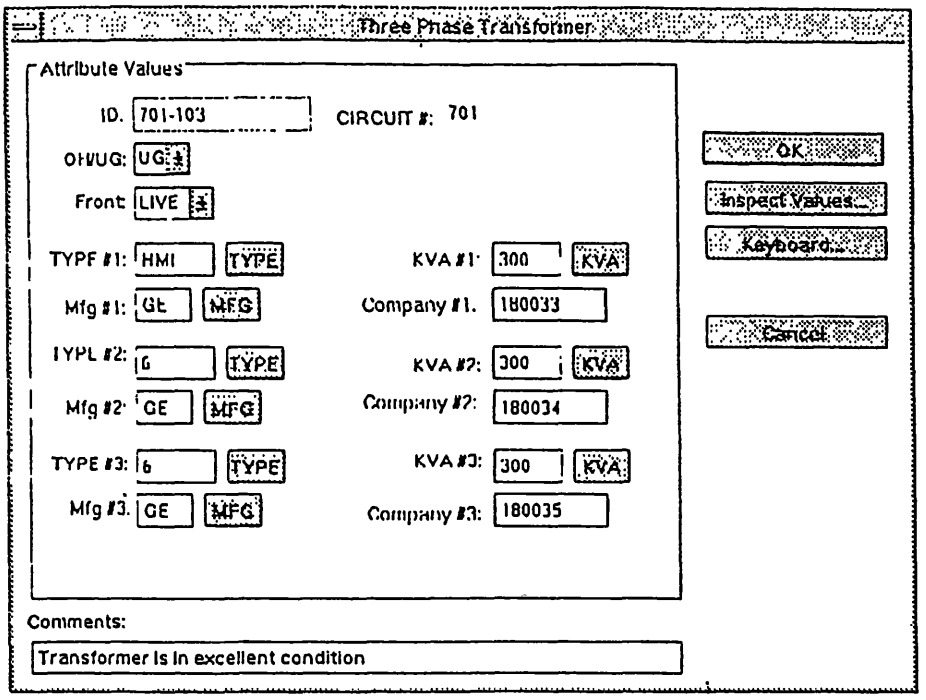


Figure 4.
This is a sample of the equipment-specific nameplate information, in this case a three phase transformer, mounted on the parent pad structure. The 'Inspect Values' option leads to the list of conditions applicable to three phase transformers.

DETAIL INSPECTION SYSTEM DOCUMENT EXAMPLES

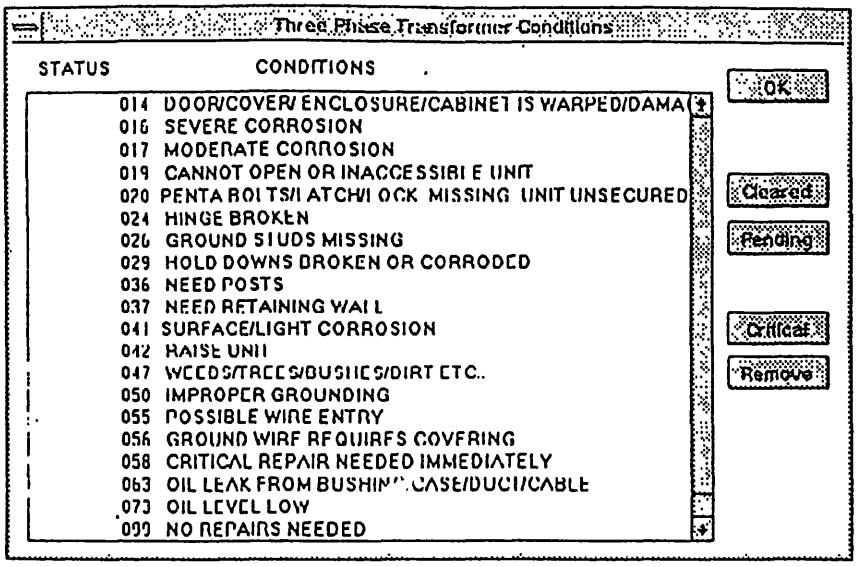


Figure 5.

This is a sample of the 'Inspect Values' conditions specific to three phase transformers. The inspector selects those conditions found on the transformer being inspected. These are then transferred to the host computer system

DETAIL INSPECTION SYSTEM DOCUMENT EXAMPLES

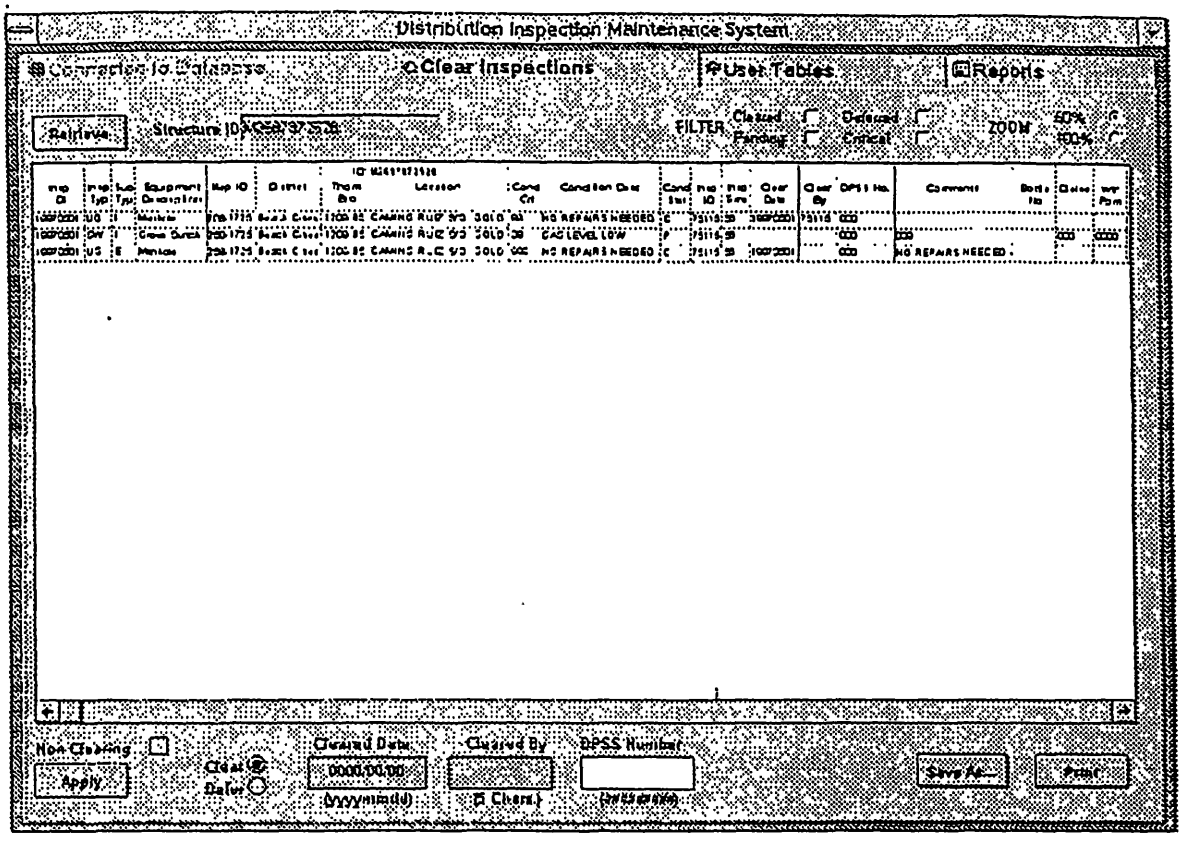


Figure 6.

This is a sample of the DIMS/Online system function to clear conditions found on various facilities. From this screen, the operator can record that work has been performed to correct the conditions discovered by the various Corrective Maintenance programs

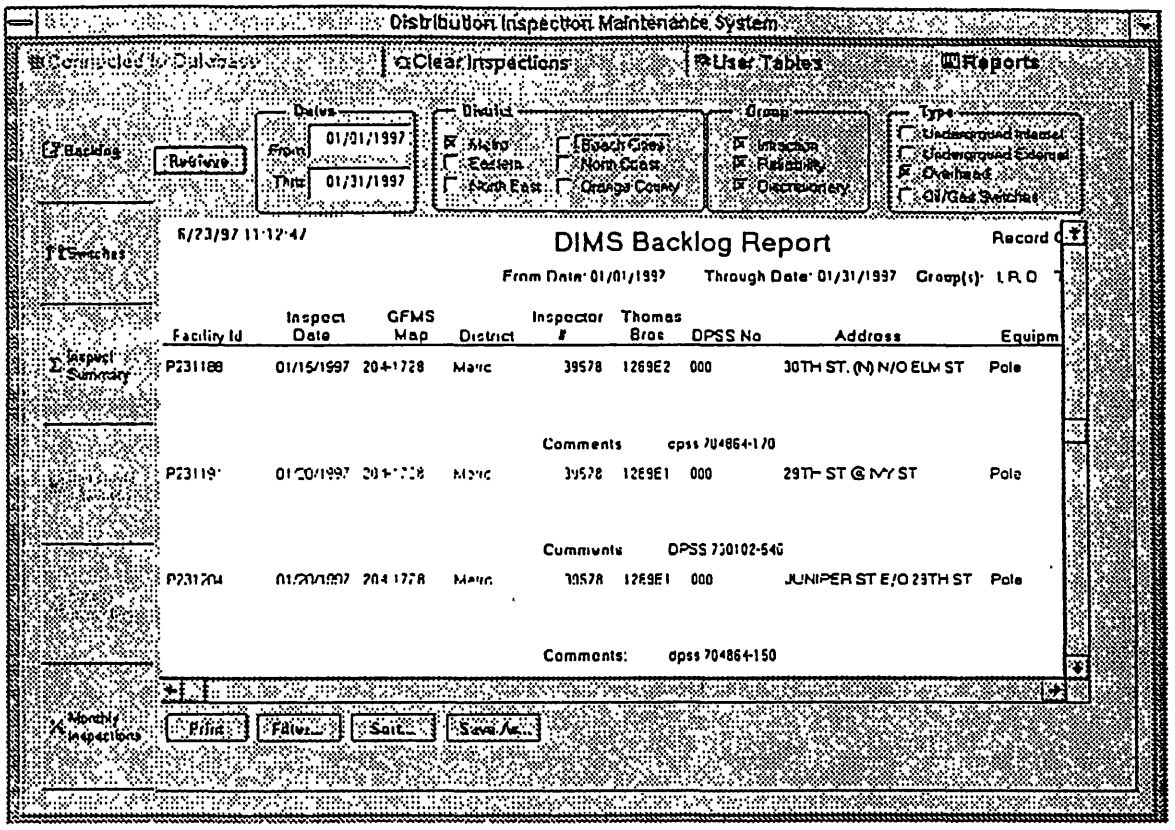


Figure 7.
This is a sample of the DIMS/Online system used to generate a backlog report of conditions found on various facilities, from which corrective work can be scheduled.

CONDITION (INSPECTION) CODES

CONDITION CODE	DESCRIPTION
Overhead Distribution Condition Codes	
201	POLE STEPS TOO LOW
203	D/M VISIBILITY STRIPS
206	DAMAGED POLE HARDWARE
207	LEANING BADLY
209	FOREIGN ATTACHMENT
228	EXPOSED CONDUCTORS
229	CLIMBING SPACE
230	DAMAGED GROUND MOULDING
231	OPEN/DAMAGED GROUND
234	D/M HIGH VOLTAGE SIGNS
235	DAMAGED ARRESTER/INSULATOR/DEADEND
236	D/M HIGH VOLTAGE SIGN
237	OIL LEAK
241	DAMAGED CROSSARM
243	DAMAGED SWITCH
244	DAMAGED SWITCH GANG OPERATOR MECHANISM
246	DAMAGED POLE
254	INSUFFICIENT CLEARANCE
262	LOW RESIDENTIAL SERVICE
264	BARE/WRAPPED SERVICE
266	FOREIGN OBJECTS IN CONDUCTORS
267	DAMAGED CAPACITOR
268	SLACK CONDUCTORS
269	DAMAGED CONDUCTORS
270	DAMAGED OR MISSING GUY GUARD
274	GUY GROUNDED ABOVE INSULATOR
276	SLACK ANCHOR GUY
277	DAMAGED GUYING
278	SLACK SPAN GUY
283	D/M/I STATION OR POLE ID

CONDITION (INSPECTION) CODES

CONDITION CODE	DESCRIPTION
Underground Distribution Condition Codes	
001	IDENTIFICATION (ID) NUMBER (#) MISSING
005	HIGH VOLTAGE SIGNS MISSING (OUTSIDE/INSIDE)
007	CAL GRID DOESN'T MATCH NUMBER ON STRUCTURE
014	DOOR/COVER/ENCLOSURE WARPED/DAMAGED
016	CORRODED OUT (SEVERE CORROSION)
017	CORROSION, SURFACE LIGHT
019	CAN'T OPEN UNIT OR INACCESSIBLE (PLEASE EXPLAIN)
020	PENTA HEAD BOLTS MISSING OR UNIT NOT SECURED
029	HOLD DOWNS CORRODED OR BROKEN OFF
047	WEEDS/TREES/BUSHES/ETC. UNIT INACCESIBLE
050	GROUND RODS NOT GROUNDED
051	VENT FAN/VAULT BLOWER DAMAGED/NOT RUNNING
055	POSSIBLE WIRE ENTRY
056	GROUND WIRE NEEDS COVERING
063	OIL LEAKING FROM BUSHING/CASE/DUCT/CABLE
093	SWITCH LEGS/SWITCH HOLD DOWNS CORRODED
095	NO CLIMBING SPACE
096	CONDUIT DAMAGED
098	CONDUIT NOT STRAPPED DOWN

OVERHEAD PATROL INSPECTION FORMS

OVERHEAD PATROL FIELD REPORT

Record patrol conditions found Report exceptions only Confirm all other facilities on the map are free of conditions listed

Circuit no _____

Map No _____

Pole no: (list individual pole numbers below)	Damaged pole 246	Damaged hardware 206	Pole leaning badly 207	Damaged crossarm 241	Foreign objects 266	Critical repairs 298
1	☐	☐	☐	☐	☐	☐
2	☐	☐	☐	☐	☐	☐
3	☐	☐	☐	☐	☐	☐
4	☐	☐	☐	☐	☐	☐
5	☐	☐	☐	☐	☐	☐
6	☐	☐	☐	☐	☐	☐
7	☐	☐	☐	☐	☐	☐
8	☐	☐	☐	☐	☐	☐
9	☐	☐	☐	☐	☐	☐
10	☐	☐	☐	☐	☐	☐
All other facilities on map are free of these conditions	Date		By		Emp No.	

Figure ***
This figure is a sample of an overhead patrol field report, which will be used to report results of overhead patrols.
For poles which have reportable conditions, this will be so indicated on the form. All other poles, for which no reportable conditions are found, will be so indicated by the circuit number inspected.

UNDERGROUND PATROL INSPECTION FORMS

UNDERGROUND PATROL FIELD REPORT

Record patrol conditions found Report exceptions only Confirm all other facilities on the map are free of conditions listed

Circuit no _____

Map No _____

Facility no: (list individual facility numbers below)	Enclosure damaged 14	Severe corrosion 16	Critical repairs 58
1	☐	☐	☐
2	☐	☐	☐
3	☐	☐	☐
4	☐	☐	☐
5	☐	☐	☐
6	☐	☐	☐
7	☐	☐	☐
8	☐	☐	☐
9	☐	☐	☐
10	☐	☐	☐

All other facilities on map are free of these conditions Date / By Emp No

Figure ***
This figure is a sample of an underground patrol field report, which will be used to report results of underground patrols.
For facilities which have reportable conditions, this will be so indicated on the form. All other facilities, for which no reportable conditions are found, will be so indicated by the facility map number inspected.

ANNUAL REPORT FORMAT

ANNUAL REPORTING FORMAT

PATROLS

Overhead

- Patrols of SDG&E's overhead electrical system are performed on an annual basis utilizing a "drive by" process.

The patrol looks, from a "drive by" process, for the most obvious structural problems and hazards.

Rural Patrol-

- % of system patrolled during year_____.
- Year of Patrol cycle (first or second).
- Number of problems identified by type:
  - Broken hardware _____
  - Poles leaning badly _____
  - Broken Crossarms _____
  - Foreign Objects _____
  - Conductors _____
  - Street lights broken _____
  - Total _____

Urban Patrol-

- % of system patrolled during year_____.*
- Number of problems identified by type:
  - Broken hardware _____
  - Poles leaning badly _____
  - Broken Crossarms _____
  - Foreign Objects _____
  - Conductors _____
  - Street Lights broken _____
  - Total _____

* If not 100% - explain:

Underground

- Patrols of SDG&E's underground electrical system are performed, utilizing a "drive by" process, as follows:
  - Patrols of facilities in urban areas are completed annually.
  - Patrols of facilities in rural areas are completed every two years.

- The patrol looks, from a "drive by" process, for the most obvious structural problems and hazards.

Rural Patrol-

- % of system patrolled during year_____.
- Year of Patrol cycle (first or second).
- Number of problems identified by type:
  - Off Pad _____
  - Cabinet damaged _____
  - Cover or door damaged _____
  - Street Lights broken _____
  - Total _____

Urban Patrol-

- % of system patrolled during year_____.*
- Number of problems identified by type:
  - Off Pad _____
  - Cabinet damaged _____
  - Cover or door damaged _____
  - Street lights broken _____
  - Total _____

* If not 100% - explain:

DETAILED

Overhead

- Detailed inspections of all poles in the overhead system will be performed on a 5 year cycle. Approximately 20% of SDG&E's total pole population will be inspected annually. Small variations in inspected percentages may occur yearly, but 100% will be completed every 5 years. This is the _____ year of the cycle.
- The detailed overhead inspection requires that each pole position be visited and that the pole and the equipment supported by the pole be carefully examined visually for conformance to CPUC General Order 95 requirements. By systematically inspecting all poles and the equipment they support, required equipment inspections will be completed within the time frames prescribed by General Order 165.
- Corrective action, for items other than those deemed needing immediate attention, is handled on a 12 months cycle.

- Beach Cities District

  - Number of poles in District _____
  - Number of poles inspected during reporting year_____. Inspected poles as a % of poles in District _____.
  - Number of poles inspected during current inspection cycle _____. Inspected poles as a % of poles in district.
  - Number of poles inspected during current inspection cycle coded as needing maintenance activity _____. Poles needing maintenance as a % of poles inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Eastern District

  - Number of poles in District _____
  - Number of poles inspected during reporting year_____. Inspected poles as a % of poles in District _____.
  - Number of poles inspected during current inspection cycle _____. Inspected poles as a % of poles in district.
  - Number of poles inspected during current inspection cycle coded as needing maintenance activity _____. Poles needing maintenance as a % of poles inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Metro District

  - Number of poles in District _____
  - Number of poles inspected during reporting year_____. Inspected poles as a % of poles in District _____.
  - Number of poles inspected during current inspection cycle _____. Inspected poles as a % of poles in district.
  - Number of poles inspected during current inspection cycle coded as needing maintenance activity _____. Poles needing maintenance as a % of poles inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- North Coast District

    - Number of poles in District _____
    - Number of poles inspected during reporting year_____. Inspected poles as a % of poles in District _____.
    - Number of poles inspected during current inspection cycle _____. Inspected poles as a % of poles in district.
    - Number of poles inspected during current inspection cycle coded as needing maintenance activity _____. Poles needing maintenance as a % of poles inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Northeast District

    - Number of poles in District _____
    - Number of poles inspected during reporting year_____. Inspected poles as a % of poles in District _____.
    - Number of poles inspected during current inspection cycle _____. Inspected poles as a % of poles in district.
    - Number of poles inspected during current inspection cycle coded as needing maintenance activity _____. Poles needing maintenance as a % of poles inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Orange County District

    - Number of poles in District _____
    - Number of poles inspected during reporting year_____. Inspected poles as a % of poles in District _____.
    - Number of poles inspected during current inspection cycle _____. Inspected poles as a % of poles in district.
    - Number of poles inspected during current inspection cycle coded as needing maintenance activity _____. Poles needing maintenance as a % of poles inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

Underground (Pad mounted)

The underground pad mounted inspection will consist of two separate inspection types:

Dead Front Equipment

- Detailed inspections of all dead front, pad mounted equipment, in the underground system will be performed on a 5 year cycle. Approximately 20% of SDG&E's total pad mounted dead front equipment will be inspected annually. Small variations in inspected percentages may occur yearly, but 100% will be completed every 5 years. This is the _____ year of the cycle.
- A detailed inspection of dead front, pad mounted, equipment requires that each dead front, pad mounted, piece of equipment be visited and the equipment be carefully examined externally by visual methods for conformance to CPUC General Order 128 requirements.

- Beach Cities District

    - Number of pieces of pad mounted dead front equipment in District _____
    - Number of pieces of pad mounted dead front equipment inspected during reporting year_____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
    - Number of pieces of pad mounted dead front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
    - Number of dead front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Dead front, pad mounted equipment needing maintenance as a % of dead front, pad mounted equipment inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Eastern District

    - Number of pieces of pad mounted dead front equipment in District _____
    - Number of pieces of pad mounted dead front equipment inspected during reporting year_____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.

- Number of pieces of pad mounted dead front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
- Number of dead front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Dead front, pad mounted equipment needing maintenance as a % of dead front, pad mounted equipment inspected during current inspection cycle _____%.
- % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- Metro District

  - Number of pieces of pad mounted dead front equipment in District _____
  - Number of pieces of pad mounted dead front equipment inspected during reporting year_____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
  - Number of pieces of pad mounted dead front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
  - Number of dead front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Dead front, pad mounted equipment needing maintenance as a % of dead front, pad mounted equipment inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- North Coast District

  - Number of pieces of pad mounted dead front equipment in District _____
  - Number of pieces of pad mounted dead front equipment inspected during reporting year_____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
  - Number of pieces of pad mounted dead front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
  - Number of dead front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Dead front, pad mounted equipment needing maintenance as a % of dead front, pad mounted equipment inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- Northeast District

    - Number of pieces of pad mounted dead front equipment in District _____
    - Number of pieces of pad mounted dead front equipment inspected during reporting year_____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
    - Number of pieces of pad mounted dead front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
    - Number of dead front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Dead front, pad mounted equipment needing maintenance as a % of dead front, pad mounted equipment inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Orange County District

    - Number of pieces of pad mounted dead front equipment in District _____
    - Number of pieces of pad mounted dead front equipment inspected during reporting year_____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
    - Number of pieces of pad mounted dead front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted dead front equipment as a % of pad mounted dead front equipment in District _____.
    - Number of dead front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Dead front, pad mounted equipment needing maintenance as a % of dead front, pad mounted equipment inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

Live Front Equipment

- Detailed inspections of all live front, pad mounted equipment, in the underground system will be performed on a 5 year cycle. Approximately 20% of SDG&E's total pad mounted live front equipment will be inspected annually. Small variations in inspected percentages may occur yearly, but 100% will be completed every 5 years. This is the _____ year of the cycle.
- A detailed inspection of live front, pad mounted, equipment requires that each live front, pad mounted, piece of equipment be visited and the equipment be opened and carefully examined externally and internally, by visual methods, for conformance to CPUC General Order 128 requirements.

- Beach Cities District

    - Number of pieces of pad mounted live front equipment in District _____
    - Number of pieces of pad mounted live front equipment inspected during reporting year_____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
    - Number of pieces of pad mounted live front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
    - Number of live front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Live front, pad mounted equipment needing maintenance as a % of live front, pad mounted equipment inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Eastern District

    - Number of pieces of pad mounted live front equipment in District _____
    - Number of pieces of pad mounted live front equipment inspected during reporting year_____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
    - Number of pieces of pad mounted live front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
    - Number of live front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Live front, pad mounted equipment needing maintenance as a % of live front, pad mounted equipment inspected during current inspection cycle _____%.

- % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- Metro District
  - Number of pieces of pad mounted live front equipment in District _____
  - Number of pieces of pad mounted live front equipment inspected during reporting year_____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
  - Number of pieces of pad mounted live front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
  - Number of live front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Live front, pad mounted equipment needing maintenance as a % of live front, pad mounted equipment inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- North Coast District
  - Number of pieces of pad mounted live front equipment in District _____
  - Number of pieces of pad mounted live front equipment inspected during reporting year_____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
  - Number of pieces of pad mounted live front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
  - Number of live front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Live front, pad mounted equipment needing maintenance as a % of live front, pad mounted equipment inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- Northeast District
  - Number of pieces of pad mounted live front equipment in District _____

- Number of pieces of pad mounted live front equipment inspected during reporting year_____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
- Number of pieces of pad mounted live front equipment inspected during current inspection cycle _____: Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
- Number of live front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Live front, pad mounted equipment needing maintenance as a % of live front, pad mounted equipment inspected during current inspection cycle _____%.
- % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- Orange County District

  - Number of pieces of pad mounted live front equipment in District _____
  - Number of pieces of pad mounted live front equipment inspected during reporting year_____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
  - Number of pieces of pad mounted live front equipment inspected during current inspection cycle _____. Inspected pieces of pad mounted live front equipment as a % of pad mounted live front equipment in District _____.
  - Number of live front, pad mounted equipment inspected during current inspection cycle coded as needing maintenance activity _____. Live front, pad mounted equipment needing maintenance as a % of live front, pad mounted equipment inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

Underground (Sub-surface)

- Detailed inspections of all underground subsurface transformers, protective devices, and regulators/capacitors, in the underground system will be performed on a 3 year cycle. Approximately 33% of SDG&E's the total population of these pieces of equipment will be inspected annually. Small variations in inspected percentages may occur yearly, but 100% will be completed every 3 years. This is the _____ year of the cycle.
- A detailed inspection of underground subsurface equipment requires that each subsurface enclosure be visited and opened so that the equipment within can be carefully examined visually for conformance to CPUC General Order 128 requirements.

- Beach Cities District

    - Number of pieces of equipment in sub-surface enclosures in District _____
    - Number of pieces of equipment in sub-surface enclosures inspected during reporting year_____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
    - Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
    - Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle coded as needing maintenance activity _____. Number of pieces of equipment in sub-surface enclosures needing maintenance as a % of the number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

    * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Eastern District

    - Number of pieces of equipment in sub-surface enclosures in District _____
    - Number of pieces of equipment in sub-surface enclosures inspected during reporting year_____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
    - Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
    - Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle coded as needing maintenance activity _____. Number of pieces of equipment in sub-surface enclosures needing maintenance as a % of the number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

    * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Metro District

    - Number of pieces of equipment in sub-surface enclosures in District _____

- Number of pieces of equipment in sub-surface enclosures inspected during reporting year_____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
- Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
- Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle coded as needing maintenance activity _____. Number of pieces of equipment in sub-surface enclosures needing maintenance as a % of the number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____%.
- % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- North Coast District

  - Number of pieces of equipment in sub-surface enclosures in District _____
  - Number of pieces of equipment in sub-surface enclosures inspected during reporting year_____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
  - Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
  - Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle coded as needing maintenance activity_____. Number of pieces of equipment in sub-surface enclosures needing maintenance as a % of the number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Northeast District

  - Number of pieces of equipment in sub-surface enclosures in District _____
  - Number of pieces of equipment in sub-surface enclosures inspected during reporting year_____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
  - Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.

- Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle coded as needing maintenance activity _____. Number of pieces of equipment in sub-surface enclosures needing maintenance as a % of the number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____%.
- % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- Orange County District

  - Number of pieces of equipment in sub-surface enclosures in District _____
  - Number of pieces of equipment in sub-surface enclosures inspected during reporting year____ _____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
  - Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____. Inspected pieces of equipment in sub-surface enclosures as a % of equipment in sub-surface enclosures in District _____.
  - Number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle coded as needing maintenance activity _____. Number of pieces of equipment in sub-surface enclosures needing maintenance as a % of the number of pieces of equipment in sub-surface enclosures inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

Underground Switch (Pad mounted and sub-surface)

- Detailed inspections of all underground switches, both pad mounted and subsurface, in the underground system will be performed on a 3 year cycle. Approximately 33% of SDG&E's the total population of these pieces of equipment will be inspected annually. Small variations in inspected percentages may occur yearly, but 100% will be completed every 3 years. This is the _____ year of the cycle.
- A detailed inspection of underground switches requires that each equipment location, pad mount or subsurface enclosure be visited and opened so that the equipment within can be carefully examined visually for conformance to CPUC General Order 128 requirements. In addition, oil filed switches will have the oil sampled and processed by the lab for conformance with SDG&E standards.

- Beach Cities District

    - Number of underground switches in District _____
    - Number of underground switches inspected during reporting year_____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
    - Number of underground switches inspected during current inspection cycle _____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
    - Number of underground switches inspected during current inspection cycle coded as needing maintenance activity _____. Number of underground switches needing maintenance as a % of the number of underground switches inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Eastern District

    - Number of underground switches in District _____
    - Number of underground switches inspected during reporting year_____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
    - Number of underground switches inspected during current inspection cycle _____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
    - Number of underground switches inspected during current inspection cycle coded as needing maintenance activity _____. Number of underground switches needing maintenance as a % of the number of underground switches inspected during current inspection cycle _____%.
    - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Metro District

    - Number of underground switches in District _____
    - Number of underground switches inspected during reporting year_____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.

- Number of underground switches inspected during current inspection cycle _____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
- Number of underground switches inspected during current inspection cycle coded as needing maintenance activity _____. Number of underground switches needing maintenance as a % of the number of underground switches inspected during current inspection cycle _____%.
- % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- North Coast District

  - Number of underground switches in District _____
  - Number of underground switches inspected during reporting year_____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
  - Number of underground switches inspected during current inspection cycle _____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
  - Number of underground switches inspected during current inspection cycle coded as needing maintenance activity _____. Number of underground switches needing maintenance as a % of the number of underground switches inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

- Northeast District

  - Number of underground switches in District _____
  - Number of underground switches inspected during reporting year_____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
  - Number of underground switches inspected during current inspection cycle _____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
  - Number of underground switches inspected during current inspection cycle coded as needing maintenance activity _____. Number of underground switches needing maintenance as a % of the number of underground switches inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- Orange County District

  - Number of underground switches in District _____
  - Number of underground switches inspected during reporting year_____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
  - Number of underground switches inspected during current inspection cycle _____. Inspected underground switches as a % of equipment in sub-surface enclosures in District _____.
  - Number of underground switches inspected during current inspection cycle coded as needing maintenance activity _____. Number of underground switches needing maintenance as a % of the number of underground switches inspected during current inspection cycle _____%.
  - % of needed corrective actions completed during 12 month cycle _____. *

  * If this answer is not 100% explain and provide date corrective actions to be completed by:

INTRUSIVE

Wood Pole

- Intrusive inspections of all poles in the overhead system will be performed in conformance with CPUC General Order 165 requirements. Approximately 10% of SDG&E's poles over 15 years of age, that have not had a previous intrusive inspection, will be inspected annually, creating a 10 year inspection cycle. This is the _____ year of the cycle. SDG&E poles that are older than 15 years and have had a previous intrusive inspection will be inspected on a 20 year cycle with approximately 5% of these poles being inspected annually. This is the _____ year of the cycle.
  Small variations in inspected percentages may occur yearly, but 100% will be completed in conformance with CPUC General Order 165 requirements.

- The intrusive pole testing program at SDG&E is a centralized program that systematically addresses all SDG&E poles on a system wide basis and not on a district by district process. Program direction and records are handled on a centralized basis.

- Intrusive testing of wood poles is normally accomplished by excavating about the pole base and/or a sound and bore of the pole about the groundline area for conformance to CPUC General Order 95 requirements.

10 Year Inspection Cycle

- Number of poles in Company _____
- Number of poles inspected during reporting year_____. Inspected poles as a % of poles in Company _____.
- Number of poles inspected during current inspection cycle _____. Inspected poles as a % of poles in Company.
- Number of poles inspected during current inspection cycle coded as needing maintenance activity _____. Number of poles needing maintenance as a % of the number of poles inspected during current inspection cycle _____%.
- % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by: .

20 Year Inspection Cycle

- Number of poles in Company _____
- Number of poles inspected during reporting year_____. Inspected poles as a % of poles in Company _____.
- Number of poles inspected during current inspection cycle _____. Inspected poles as a % of poles in Company.
- Number of poles inspected during current inspection cycle coded as needing maintenance activity _____. Number of poles needing maintenance as a % of the number of poles inspected during current inspection cycle _____%.
- % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 100% explain and provide date corrective actions to be completed by:

- Number of poles inspected during current inspection cycle coded as needing maintenance activity _____. Number of poles needing maintenance as a % of the number of poles inspected during current inspection cycle _____%.
- % of needed corrective actions completed during 12 month cycle _____. *

* If this answer is not 0% explain and provide date corrective actions to be completed by:

- % of poles in District _____.

CERTIFICATE OF SERVICE

I hereby certify that a copy of **GENERAL ORDER 165 COMPLIANCE PLAN FOR SAN DIEGO GAS & ELECTRIC** has been mailed to each such party-of-interest or to their attorney of record in the service list of R.96-11-004/I.95-02-015 by mailing a copy thereof properly stamped and addressed.

Executed on July 1, 1998 at San Diego, California

Kathleen Corona-Gotay

I. Introduction

This report is San Diego Gas & Electric's (SDG&E) first annual report on its maintenance program. Pursuant to CPUC General Order 165, Adopted March 31, 1997 and Effective March 31, 1997, "Each utility subject to this General Order shall submit an annual report detailing its compliance with this General Order under penalty of perjury". This first report is required no later than July 1, 1998.

Background

On February 22, 1995 the CPUC issued an Order Instituting an Investigation (I.95-02-015) into the rates, charges, services, and practices of Pacific Gas and Electric Company. It was recognized during this OII that measurable standards or benchmarks for assessing the reasonableness of electric distribution performance were needed and Decision 95-09-043 initiated an inquiry into this issue. Subsequently, the California Legislature enacted Assembly Bill 1890, which adopted Public Utilities Code (PU) Section 364, requiring the CPUC to "adopt inspection, maintenance, repair, and replacement standards" no later than March 31, 1997. On March 31, 1997, the CPUC issued Decision 97-03-070 which implemented General Order 165.

In addition, Decision 97-03-070 required "Each utility subject to this General Order shall submit to the Commission by no later than July 1, 1997, compliance plans for the inspections and record-keeping required by this order".

July 1, 1997 Compliance Plans

In accordance with Ordering Paragraph 3 of Decision 97-03-070 SDG&E filed its Compliance Plan with the CPUC (copy attached). This plan indicated that existing inspection procedures would be continued through the end of 1997 while needed modifications were made to comply with General Order 165.This is consistent with the language in the decision at page iv: "These compliance plans will include the proposed forms for annual reports and source records, as well as the utility's plans for the types of inspections and equipment to be inspected during the coming year." January 1, 1998 SDG&E instituted the modifications needed to put its Corrective Maintenance Program (CMP) in compliance with GO 165 and started reportable inspection procedures. The reportable time frame is January 1 through December 31. July 1, 1999's report will cover 1998 inspection activities. This report covers the efforts needed to implement the new CMP program during the last half of 1997.

Program Implementation

The provisions of GO 165 required changes to the CMP procedures, the practices of inspections in each cycle, and the data systems used to perform those inspections. The highlights of the work that was performed during the last six months of 1997 to implement a CMP that was in compliance with the new GO 165 included:

- The CMP program was redesigned to incorporate items now required under GO 165, including new cycle types (e.g. subsurface), new cycle criteria (e.g. 10/15/20 year intrusive wood pole inspections), and annual patrols of urban and biannual patrols of rural facilities. New material (maps, forms) and procedures were devised to accommodate these changes.
- Reengineering was completed for computer programs and equipment used for inspections: Distribution Inspection & Maintenance System (DIMS); DIMS OnLine (DIMS/ONL); and DIMS Mobile Data Terminals (DIMS/MDT).
- Changes were made to the Geographic Facility Maintenance System (GFMS) and the Facility Information Management System (FIMS) to provide a repository for both the map and inspection data.
- Training on the new procedures and software for the line checkers and inspectors, foremen and supervisors was designed and accomplished. Training guides, field and reference materials were designed and published.
- New publications of the Corrective Maintenance Program Manual, and the User Guides to DIMS/MDT and DIMS/ONL were completed and distributed.

Prepared by F. D. Marsman

APPENDIX 3

SDGE

A Sempra Energy utility

Todd Cahill
Regulatory Tariff Manager
Tariffs & Regulatory Accounts
8330 Century Park Court CP 32
San Diego, CA 92123-1550
Tel: 858-654-1770

June 29, 2007

Docket Clerk
California Public Utilities Commission
505 Van Ness Avenue, Room 2001
San Francisco, CA 94102

Re: Electric Distribution Standards Proceeding – SDG&E's General Order 165 Annual Corrective Maintenance Report

Dear Docket Clerk:

Pursuant to California Public Utilities Commission (CPUC) Decision 97-03-070, enclosed please find the original and five (5) copies of San Diego Gas & Electric Company's General Order 165 Annual Corrective Maintenance Report.

A copy of this filing is being served electronically to all parties of record in R.96-11-004 as evidenced by the attached Certificate of Service.

Sincerely,

Todd Cahill
Regulatory Tariff Manager

Enclosure

cc: Parties of Record in R.96-11-004

CERTIFICATE OF SERVICE

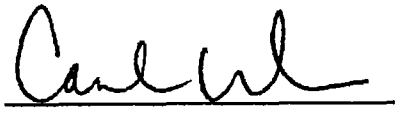
I hereby certify that I have this day served via electronic mail a true copy of San Diego Gas & Electric Company's General Order 165 Annual Corrective Maintenance Report to the service list for R.96-11-004

Dated: June 29, 2007

Felicia Gray

VERIFICATION

Upon information and belief, I declare under penalty of perjury under the laws of the Sate of California that the contents of this report are true, signed this 29th day of June 2007, in San Diego, California.



Caroline Winn, Director

Transmission & Distribution Asset Management

Prepared by: Gregory L. Walters

Craig Holland

Robert Charlton

SAN DIEGO GAS & ELECTRIC COMPANY

CORRECTIVE MAINTENANCE PROGRAM

REPORT FOR

2006

This report contains the results of San Diego Gas & Electric Company's (SDG&E) General Order (GO) 165 compliance program for inspection and maintenance of electric distribution facilities and covers the period from January 1, 2006 through December 31, 2006.

SDG&E's GO 165 compliance program is called the Corrective Maintenance Program (CMP) and is managed by SDG&E's Electric Transmission and Distribution organization. Through coordination with the Construction & Operations (C&O) Centers' Electric Supervisors, Inspectors, Linemen, and other personnel, the inspections required by GO 165 are performed and follow-up work to correct deficiencies is completed. The CMP uses the DIMS (Distribution Inspection Maintenance System) electronic database to schedule, record, and track all inspections and repair work required under GO 165. Monthly status reports are produced to track the progress of the inspections and repair work.

Summary of the 2006 Year End Report

SDG&E continues to have the goal of correcting infractions found during GO165 inspections within a 12-month time-frame from date of inspection. Infractions that may pose a hazard to the public and/or to electric distribution line personnel are repaired within a shorter timeframe, relative to the severity of the infraction and the nature of the hazard. Third Party Infractions that are out of the control of SDG&E, such as those involving private property, environmental and other utilities' issues, may require more time to be resolved. These infractions are noted as "Pending" within our record keeping process and put in the "Deferred" category. Pending infractions in the Deferred category are tracked by SDG&E's Transmission and Distribution (T&D) Asset Management, Vegetation Management, Land Management and Legal departments. These departments continue to refine the process for resolving third party infractions as outlined in Appendix A. Facilities that are considered for and granted Deferral status must meet strict internal requirements.

To assure compliance with GO 165 inspection requirements and SDG&E's 12-month time-frame from date of inspection to complete corrections and/or required maintenance, SDG&E has developed a centralized Quality Assurance program and established criteria for C&O Center internal audits. Internal audits cover inspections and repairs to verify that infractions are identified and corrected.

CORRECTIVE

MAINTENANCE

PROGRAM

DETAILED

INSPECTIONS

REPORT

CPUC 2006 Yearend Report

District	Inspect Type	Total Structures	Total Structures Scheduled	Percent Structures Scheduled	Total Structures Inspected	Percent Scheduled Inspected	Inspected in 2005 cleared in 2006	Inspected in 2006 cleared in 2006	Inspected in 2006, pending
Beach Cities									
	AGE	12,384	2,430	19.62%	2,430	100.00%	37	2,044	78
	AGI	4,681	1,006	21.49%	1,006	100.00%	24	855	60
	OHVI	22,497	4,996	22.21%	4,996	100.00%	1,449	3,740	1,500
	POIN	19,495	138	0.71%	138	100.00%	30	20	3
	SS3	273	75	27.47%	75	100.00%	0	43	1
	SWI	491	147	29.94%	147	100.00%	1	122	29
Eastern									
	AGE	10,474	1,732	16.54%	1,732	100.00%	158	1,170	112
	AGI	2,856	817	28.61%	817	100.00%	70	647	69
	OHVI	58,738	11,818	20.12%	11,818	100.00%	5,152	3,402	4,242
	POIN	51,234	18,355	35.83%	18,355	100.00%	517	17,952	290
	SS3	38	12	31.58%	12	100.00%	0	4	2
	SWI	132	46	34.85%	46	100.00%	4	34	9
Metro									
	AGE	12,751	2,583	20.26%	2,583	100.00%	1,008	2,087	771
	AGI	3,612	734	20.32%	734	100.00%	120	542	123
	OHVI	42,966	8,810	20.50%	8,810	100.00%	3,475	2,897	3,313
	POIN	38,446	273	0.71%	273	100.00%	19	74	9
	SS3	506	109	21.54%	109	100.00%	22	70	8
	SWI	449	94	20.94%	94	100.00%	16	33	24
North Coast									
	AGE	19,352	3,390	17.52%	3,390	100.00%	1,172	2,817	746
	AGI	3,635	732	20.14%	732	100.00%	146	505	215
	OHVI	23,741	4,906	20.66%	4,906	100.00%	1,950	4,334	1,651
	POIN	21,433	1,341	6.26%	1,341	100.00%	1	1,088	76
	SS3	72	19	26.39%	19	100.00%	1	15	5
	SWI	258	78	30.23%	78	100.00%	19	75	17
North East									
	AGE	21,635	3,682	17.02%	3,682	100.00%	581	2,533	813
	AGI	4,595	1,277	27.79%	1,277	100.00%	96	909	335
	OHVI	63,979	13,569	21.21%	13,569	100.00%	3,667	5,984	2,830
	POIN	60,277	448	0.74%	448	100.00%	352	727	20
	SS3	4	2	50.00%	2	100.00%	0	0	0
	SWI	250	64	25.60%	64	100.00%	3	49	8
Orange County									
	AGE	10,648	1,962	18.43%	1,962	100.00%	237	1,753	580
	AGI	2,037	450	22.09%	450	100.00%	35	399	155
	OHVI	5,617	1,161	20.67%	1,161	100.00%	278	746	198
	POIN	4,926	32	0.65%	32	100.00%	0	1	0
	SS3	215	49	22.79%	49	100.00%	0	46	5
	SWI	150	35	23.33%	35	100.00%	1	35	25

Division of Inspections

The quantity of facilities is dynamic because of additions and removals of equipment due to maintenance, demolition, new customers, new technology, reliability and conversion of overhead lines to underground lines or other changes to the electric distribution system. When new equipment is added, it is regarded as inspected at date of installation. The new piece of equipment is then scheduled for inspection during the next inspection cycle. All equipment in the current inventory is scheduled for inspection at the required interval..

All facilities scheduled for inspection in 2007 are included as Attachment "A" in accordance with GO 165. Equipment inspections are divided into categories of equipment type, subdivided by district, and further subdivided by geographic region. Actual inspections per month may vary due to operating conditions, weather, administrative shifts in inspection areas, or other unanticipated impacts.

All equipment on a given structure is inspected at the same time and the inspection record is documented in the structure record. The CMP goals for the year are determined by the system-wide counts of facilities in each inspection type, divided by the number of years in the cycle length.

SDG&E CMP cycles are designed to match General Order 165 requirements. The following section describes SDG&E's CMP cycles by equipment type.

Description of Major SDG&E CMP Cycles

OVERHEAD VISUAL

- OHVI (Overhead Visual, 5-year)

  This cycle consists of a detailed walk-around inspection of all distribution poles, pole-mounted facilities with primary and secondary conductors, and distribution equipment on transmission poles. These inspections identify conditions out of compliance with GO95. This is a five-year cycle.

ABOVE GROUND 5 (INTERNAL AND EXTERNAL INSPECTIONS)

This cycle consists of AGE (Above Ground Deadfront) and AGI (Above Ground Livefront) detailed external and internal inspections of deadfront and livefront pad-mounted facilities to identify conditions out of compliance with GO 128.

- AGE (Above Ground Deadfront, 5- year)

  This cycle consists of a detailed external and internal inspection of deadfront pad-mounted facilities to identify conditions out of compliance with GO128. This is a five-year inspection cycle. The AGE cycle originally only required an external inspection; however, changes in 1999 modified this requirement to include an internal inspection. The cycle is still named AGE to separate the deadfront equipment data from livefront equipment data.

- AGI (Above Ground Livefront, 5- year)

  This cycle consists of a detailed external and internal inspection of livefront pad-mounted facilities to identify conditions out of compliance with GO128. This is a five-year inspection cycle.

SUBSURFACE, WITH EQUIPMENT

- SS3 (Subsurface, 3-year)

  This cycle consists of a detailed inspection of subsurface structures (manholes, vaults, primary handholes and subsurface enclosures) containing distribution equipment. (Thus, structures with cable taps, splices or pass throughs only are in the SS10 cycle.) The SS3 cycle consists of a detailed inspection of these facilities to identify conditions out of compliance with GO128. This is a three-year inspection cycle

  SUBSURFACE, NO EQUIPMENT (Not Required by GO 165)

- SS10 (Subsurface, 10-year)

  Subsurface enclosures, vaults, handholes and manholes without equipment are not required to be inspected under GO 165. However, GO 128, does require that all equipment be in safe and reliable operating condition. Therefore, SDG&E has implemented a 10-year inspection cycle to address these facilities. This cycle consists of a detailed inspection of these facilities to identify conditions out of compliance with GO128.

SWITCH

- SW3 (Oil, Air, Vacuum or Gas Switch, 3-year)

  This is a three-year cycle that consists of a specialized inspection of all subsurface and pad-mounted oil, air, vacuum and gas switches. There are approximately 1,750 switches in this cycle. Oil samples and gas pressure

readings are obtained and recorded in the Distribution Inspection and Maintenance System (DIMS). The laboratory performs analysis of oil samples for low dielectric strength and high water content. These results and the inspection records are stored in DIMS. The status of "Do Not Operate Energized" (DOE) switches for prioritizing replacements are also tracked in DIMS. Other conditions out of compliance with GO128 are also identified.

WOOD POLE INTEGRITY

- Pole (10/20 year)

These inspections are performed on a 10-year cycle. Each pole is inspected visually and if conditions warrant, intrusively. Any pole 15 years of age or older is inspected intrusively. The form of the intrusive inspection is normally an excavation about the pole base and/or a sound and bore of the pole at ground line. Treatment is applied at this time in the form of ground line pastes and/or internal pastes. The 10-year cycle fulfills the requirements of GO165, which are: 1) all poles over 15 years of age are intrusively inspected within 10 years and 2) all poles which previously passed intrusive inspection are to be inspected intrusively again on a 20 year cycle. The 10-year cycle requirements result in approximately 23,200 poles to be inspected each year.

The wood pole integrity inspections are currently performed by a SDG&E contractor who also applies wood preservative treatments and installs mechanical reinforcements (C-truss or Fiberwrap). The type of treatment is dependent upon the age of the pole, the individual inspection history, and the overall condition of the structure. SDG&E's Vegetation Management group administers the wood pole intrusive inspection and treatment program.

If a pole that appears to need replacement is found on a CMP inspection, SDG&E's contractor for wood pole integrity inspections or the Districts may bore into the pole to determine if it needs reinforcement or replacement based on the remaining shell thickness. The choice to restore a pole rather than replace the pole is based on the strength of the pole which is measured by remaining shell thickness. SDG&E's Transmission Engineering and

Electric Distribution Standards Specification for Inspection, Treatment and Reinforcement of In-Service Wood Poles (Specification NO. TE-0108 and Specification NO. 337) specifies the criteria for the rejection of a pole. It also addresses a pole's suitability for C-truss or Fiber-wrap based on the remaining shell thickness for various lengths of pole. If a pole does not have sufficient shell thickness for C-truss or Fiber-wrap, it is rejected and replaced.

PATROL, URBAN

- Patrol 1 (urban patrol, 1 year)

The purpose of the urban patrol is to identify obvious structural problems and hazards. This cycle consists of a drive by, fly by, or walk-by inspection of every overhead, underground and streetlight facility in urban areas. Under agreement of interpretation with the CPUC, 'urban' is defined as incorporated areas. (GO165 defined 'urban' as those areas with 1000 persons or more per square mile). The General Order defines a patrol as a "simple visual inspection, of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards." Patrol Inspection Record forms are used to identify obvious structural problems and hazards, which are also recorded in DIMS.

PATROL, RURAL

- Patrol 2 (rural patrol, 2 year)

The purpose of the rural patrol is to identify obvious structural problems and hazards. This cycle consists of a drive by, fly by, or walk-by inspection of every overhead, underground and streetlight facilities in rural areas. Under agreement of

interpretation with the CPUC, 'rural' is defined as unincorporated areas. (GO165 defined 'rural' as those areas with less than 1000 persons per square mile). The General Order defines a patrol as a "simple visual inspection, of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards." Patrol Inspection Record forms are used to identify obvious structural problems and hazards, which are also recorded in DIMS.

SDG&E CMP INSPECTION CYCLES
CYCLES FROM SDGE'S FILED COMPLIANCE PLAN

SDG&E System Inspection Cycles
(Maximum intervals in years)

	PATROL		DETAILED		INTRUSIVE	
	Urban	Rural	Urban	Rural	Urban	Rural
Transformers						
Overhead	Patrol1	Patrol2	OHVI 5	OHVI 5		
Underground (Subsurface)	Patrol1	Patrol2	SS 3	SS 3		
Pad Mounted (live front)	Patrol1	Patrol2	AGI 5	AGI 5		
Pad Mounted (dead front)	Patrol1	Patrol2	AGE 5	AGE 5		
Switching/Protective Devices						
Overhead	Patrol1	Patrol2	OHVI 5	OHVI 5		
Underground (Subsurface)	Patrol1	Patrol2	SS 3	SS 3		
Pad Mounted (live front)	Patrol1	Patrol2	AGI 5	AGI 5		
Pad Mounted (dead front)	Patrol1	Patrol2	AGI 5	AGI 5		
Oil & Gas switches (above or below surface)	Patrol1	Patrol2	SW 3	SW 3		
Regulators/Capacitors						
Overhead	Patrol1	Patrol2	OHVI 5	OHVI 5		
Underground (Subsurface)	Patrol1	Patrol2	SS 3	SS 3		
Pad Mounted (live front)	Patrol1	Patrol2	AGI 5	AGI 5		
Pad Mounted (dead front)	Patrol1	Patrol2	AGE 5	AGE 5		
Overhead Conductors and Cables	Patrol1	Patrol2	OHVI 5	OHVI 5		
Streetlighting	Patrol1	Patrol2	x	x		
Wood Poles under 15 years	Patrol1	Patrol2	x	x	x	x
Wood Poles over 15 years which have not been subject to intrusive inspection	Patrol1	Patrol2	x	x	x Wood Pole Intrusive 10	x Wood Pole Intrusive 10
Wood Poles which passed intrusive inspection					Wood Pole Intrusive 20	Wood Pole Intrusive 20

Where the cycles are:

Patrol1	Patrol cycle- one-year
Patrol2	Patrol cycle- two year
OHVI 5	Overhead five-year detail inspection
AGE 5	Above Ground Deadfront external and internal five-year detail inspection
AGI 5	Above Ground Livefront external and internal five-year detail inspection
SS 3	Subsurface internal three-year detail inspection
SW 3	Switch internal three-year inspection
POLE 10	Wood pole intrusive ten-year inspection

PROGRAM CYCLE SUMMARY

Program Cycle	Cycle Interval	Start Year
Overhead Visual	5	1998
Above Ground Deadfront (AGE)	5	1998
Above Ground Livefront (AGI)	5	1998
Subsurface (SS3)	3	1998
Switches (SW3)	3	1998
Intrusive Wood Pole Insp. (POIN)	10	1998
Patrols Urban	1	1998
Patrol Rural	2	1998

EQUIPMENT DETAIL OVERHEAD
Overhead Distribution System:

Overhead Visual

Distribution Poles & Distribution Equipment	Inspection Program (in years)			
	Urban	Rural	Detailed	Intrusive
Pole	1	2	5	10, 20
Double Pole	1	2	5	10, 20
Pole Stub	1	2	5	10, 20
Crossarm	1	2	5	
Anchor/Guy	1	2	5	
Conductor	1	2	5	
Connector/Splice	1	2	5	
Transformer	1	2	5	
Switch	1	2	5	
Lightning Arrestor	1	2	5	
Fuse Holder	1	2	5	
Cutout	1	2	5	
Fixed Capacitor	1	2	5	
Switched Capacitor	1	2	5	
Riser	1	2	5	
Cable Terminal/Pothead	1	2	5	
Insulator	1	2	5	
Auto Throw Over	1	2	5	
Service Restorer	1	2	5	
Pole Hardware	1	2	5	

EQUIPMENT DETAIL ABOVE GROUND DEADFRONT (AGE)

Underground Distribution System:

Above Ground Deadfront (AGE)

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)		
	Urban	Rural	External
Pad Structure - D Facility ID			
• Pad with no Equip.	1	2	5
• Pad with following Equip.	1	2	5
• 1 Phase Xfmr (Dead)	1	2	5
• 3 Phase Xfmr (Dead)	1	2	5
• Auto Throw Over	1	2	5
• Service Restorer	1	2	5
• Boost/Buck Station (Dead)	1	2	5
• Step Up/Dwn Station (Dead)	1	2	5
• Regulator (Dead)	1	2	5
Manhole - W or Y Facility ID			
• Manhole with following Equip.	1	2	5
• 1 Phase Xfmr (Dead)	1	2	5
• 3 Phase Xfmr (Dead)	1	2	5
Prim. HH - B or W Facility ID			
• Prim. HH with no Equip.	1	2	5
• Prim. HH w/following Equip.	1	2	5
• 1 Phase Xfmr (Dead)	1	2	5
• 3 Phase Xfmr (Dead)	1	2	5
• Auto Throw Over	1	2	5
Subsurface Encl.- S Facility ID			
• Subsurface Encl. w/no Equip.	1	2	5

EQUIPMENT DETAIL ABOVE GROUND LIVEFRONT (AGI)

Above Ground Livefront (AGI)

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)		
	Urban	Rural	Internal
Pad Structure - D Facility ID			
• Pad with following Equip.	1	2	5
• Non-Oil/Gas Switch	1	2	5
• Non-Oil/Gas Group Switch	1	2	5
• 1 Phase Xfmr (Live)	1	2	5
• 3 Phase Xfmr (Live)	1	2	5
• Fixed Capacitor	1	2	5
• Switched Capacitor	1	2	5
• Fuse Cabinet	1	2	5
• Fused Switch Cabinet	1	2	5
• Terminator	1	2	5
• Boost/Buck Station (Live)	1	2	5
• Step Up/Dwn Station (Live)	1	2	5
• Regulator (Live)	1	2	5
Manhole - W or Y Facility ID			
• Manhole with following Equip.	1	2	5
• Non-Oil/Gas Switch	1	2	5
• Non-Oil/Gas Group Switch	1	2	5
• 1 Phase Xfmr (Live)	1	2	5
• 3 Phase Xfmr (Live)	1	2	5
• Fuse Cabinet	1	2	5
• Fused Switch Cabinet	1	2	5
• Terminator	1	2	5
Manhole - M Facility ID			
• Manhole with following Equip.	1	2	5
• Terminator	1	2	5
Prim. HH - B or W Facility ID			
• Prim. HH w/following Equip	1	2	5
• Non-Oil/Gas Switch	1	2	5
• Non-Oil/Gas Group Switch	1	2	5
• 1 Phase Xfmr (Live)	1	2	5
• 3 Phase Xfmr (Live)	1	2	5
• Fuse Cabinet	1	2	5

EQUIPMENT DETAIL ABOVE GROUND LIVEFRONT (AGI) (CONTINUED)

Above Ground Livefront (AGI) (Continued)

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)		
	Urban	Rural	Internal
Prim. HH - B or W Facility ID			
• Fused Switch Cabinet	1	2	5
• Terminator	1	2	5
• Auto Throw Over	1	2	5
Enclosure - E Facility ID			
• Enclosure with following Equip.	1	2	5
• 1 Phase Xfmr (Dead or Live)	1	2	5
• 3 Phase Xfmr (Dead or Live)	1	2	5
• Terminator	1	2	5
• Cable Tap with AGI Equipment	1	2	5
• Step Up/Dwn Station	1	2	5

EQUIPMENT DETAIL SUBSURFACE 3

Subsurface 3

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)		
	Urban	Rural	Internal
Manhole - M Facility ID			
Manhole with following Equip.	1	2	3
• Non-Oil/Gas Switch			3
• Non-Oil/Gas Group Switch			3
• 1 Phase Xfmr (Dead or Live)			3
• 3 Phase Xfmr (Dead or Live)			3
• Fuse Cabinet			3
• Auto Throw Over			3
• Cable Tap with SS3 equipment			3
Primary Handhole - H Facility ID			
Prim HH with following Equip.	1	2	3
• Non-Oil/Gas Switch			3
• Non-Oil/Gas Group Switch			3
• 1 Phase Xfmr (Dead or Live)			3
• 3 Phase Xfmr (Dead or Live)			3
• Terminator			3
• Step Up/Dwn Station			3
• Service Restorer			3
• Cable Tap with Subsurface 3 Equipment			3
Vault - U Vault – U Facility ID			
Vault with following Equip.	1	2	3
• Non-Oil/Gas Switch			3
• Non-Oil/Gas Group Switch			3
• 1 Phase Xfmr (Dead or Live)			3
• 3 Phase Xfmr (Dead or Live)			3
• Fixed Capacitor			3
• Switched Capacitor			3
• Fuse Cabinet			3
• Step Up/Dwn Station			3
• Auto Throw Over			3
Subsurface Encl.- S Facility ID			
Subsurf. Encl containing	1	2	3
• Non-Oil/Gas Switch			3
• Non-Oil/Gas Group Switch			3
• 1 Phase Xfmr (Dead or Live)			3
• 3 Phase Xfmr (Dead or Live)			3

EQUIPMENT DETAIL SUBSURFACE 10

Subsurface 10

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)		
	Urban	Rural	Internal
Manhole - W or Y Facility ID			
Manhole with no Equipment	1	2	10
Manhole - M Facility ID			
• Manhole with no Equip.	1	2	10
• Manhole with following Equip.	1	2	10
• Cable Tap with no Equipment			10
Primary Handhole - H Facility ID			
• Prim. HH with following Equip.	1	2	10
• Cable Tap with no Equipment			10
Vault - U Facility ID			
• Vault with following Equip.	1	2	10
• Cable Tap with no Equipment			10
Subsurface Encl.- S Facility ID			
• Subsurf. Encl w/following Equip.	1	2	10
• Cable Tap with no Equipment			10

EQUIPMENT DETAIL OIL & GAS SWITCHES

Oil and Gas Switches

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)		
	Urban	Rural	Switch
Manhole - W or Y Facility ID			
Manhole with following Equip	1	2	3
• Oil/Gas Switch	1	2	3
• Oil/Gas Group Switch	1	2	3
Manhole - M Facility ID			
Manhole with following Equip	1	2	3
• Oil/Gas Switch			3
• Oil/Gas Group Switch			3
Prim. HH - B or W Facility ID			
Prim HH with following Equip	1	2	3
• Oil/Gas Switch	1	2	3
• Oil/Gas Group Switch	1	2	3
Primary Handhole - H Facility ID			
Prim. HH with following Equip.	1	2	3
• Oil/Gas Switch			3
• Oil/Gas Group Switch			3
Vault - U Facility ID			
Vault with following Equip.	1	2	3
• Oil/Gas Switch			3
• Oil/Gas Group Switch			3
Subsurface Encl.- S Facility ID			
Subsurf. Encl w/following Equip.	1	2	3
• Oil/Gas Switch			3
• Oil/Gas Group Switch			3

ATTACHMENT A

2007

CORRECTIVE MAINTENANCE

SCHEDULE

District	Inspection Type	Inspections Due in 2007
Beach Cities	AGE	1,677
	AGI	736
	OHVI	4,279
	SS3	102
	SWI	165
Metro	AGE	1,698
	AGI	630
	OHVI	7,393
	SS3	190
	SWI	180
Eastern	AGE	1,711
	AGI	291
	OHVI	11,235
	SS3	13
	SWI	37
North Coast	AGE	2,719
	AGI	552
	OHVI	4,365
	SS3	29
	SWI	92
North East	AGE	3,723
	AGI	400
	OHVI	11,489
	SS3	2
	SWI	116
Orange County	AGE	1,715
	AGI	301
	OHVI	966
	SS3	138
	SWI	66
		56,910

APPENDIX A

SDG&E THIRD PARTY

INFRACTION

PROCESS

Third Party Infraction Process

Infractions caused by "Third Parties" are an ongoing issue that SDG&E has dealt with since the implementation of General Order 165. On a daily basis, Overhead and Underground Inspectors encounter GO 95 and 128 infractions caused by telecommunications companies or private property owners, who do not understand the implications of these codes. For example, a large number of private property owners try to make underground pad-mounted equipment more aesthetically pleasing by building retaining walls and locating vegetation in front of pad-mounted equipment. Many of these customers do not understand that their attempts to cover up equipment violates the workspace that General Order 128 requires SDG&E to maintain and may also make the equipment inaccessible for line personnel to work on and for inspectors to inspect.

Once SDG&E is aware of such violations, action is taken even though SDG&E did not cause the problem. SDG&E has developed the "Investigation Order System" that gives notification to the violating third parties and attempts to bring about resolution of these types of infractions.

The Process involves:

1. The Inspector, upon a detailed inspection, observes and records the violation in the Mobile Data Terminal (MDT). This information is uploaded into SDG&E's "Distribution Inspection & Maintenance System" (DIMS) where it is officially recorded and tracked.

2. The inspector records the structure identification number and the address/location.
3. The type of violation/infraction is recorded.
4. A digital picture of the infraction is taken.
5. The inspector forwards the information to SDG&E's Electric Distribution Compliance Management Group (CMG).
6. CMG examines all information .The infraction is given a tracking number and recorded in the "Investigation Order Database".
7. CMG then attaches the "General Order 95/128 Infraction Form" requesting that the infraction be resolved in 90 days. Private property issues are forwarded to SDG&E's Land Department for resolution. Infractions caused by telecommunication companies and others are forwarded directly to the company causing the infraction.

In 2006, the Corrective Maintenance Program's "Investigation Order System" processed 2,402 "Third Party" Investigation Orders. Of the 2,402 orders, 1,542 were resolved. In 2005, 3,176 "Third Party" infractions were processed and the violating parties fixed 925 of these.

SDG&E strives to be proactive in reducing the amount of "Third Party" infractions. On pad-mounted equipment, SDG&E has developed a sign similar to the "High Voltage" warning sign that shows the workspace dimensions needed for pad-mounted equipment. This sign is attached on the equipment in a position that is highly visible.

In addition to the workspace dimension alert sign, in 2004, SDG&E initiated programs with the telecommunication companies in its service territory to develop a more common and comprehensive understanding of what is required when constructing and maintaining infrastructure in accordance with General Orders 95 and 128. These programs have proven to be very beneficial for all parties, considering the fact that a large number of electric and communication equipment occupy jointly used overhead poles and underground trenches.

By educating its customers and companies that build their infrastructure in close proximity to electric facilities, SDG&E has reduced the number of "Third Party" violations of General Orders 95 and 128 found during the General Order 165 Detailed Inspection cycles as noted above. This education reduces the number of infractions and improves the level of safety for the public, all utility workers and reliability of the system.